RESEARCH CONTRIBUTIONS

Articles in Journals

170 Michalska, H., Generic nonlinear stabilization of systems with matching algebraic structure, *Annual Reviews in Control*, Elsevier, Vol. 35, 2011, pp. 215-234.

169 Gosline, A., Hayward, V., Michalska, H., Ineluctability of oscillations in systems with digital implementation of derivative feedback, *Automatica*, Vol. 47, 2011, pp. 2444-2450.

168 Xinjilefu, Hayward, V., Michalska, H., Hybrid stabilizing control for the spatial double inverted pendulum, in *Advances in Intelligent and Soft Computing*, Vol. 83, Editor-in-Chief: J. Kacprzyk, Springer-Verlag Berlin Heidelberg, 2010, pp. 201-214.

167 Ganine, V., Legrand, M., Michalska, H., and Pierre, C. ; Parameterized reduced order modeling of misaligned stacked disks rotor assemblies, *Journal of Sound and Vibration*, Vol. 330, 2011, pp. 445-460. DOI 10.1016.

166 Ganine, V., Legrand, M., Michalska, H., Pierre, C., A sparse preconditioned iterative method for vibration analysis of geometrically mistuned bladed disks, *Computers and Structures*, Vol. 87, 2009, pp. 342-354.

165 Tabandeh, S.; Michalska, H., Random search techniques for optimal bidding in auction markets, *IAENG International Journal of Applied Mathematics*, Vol. 39, Issue 4, November , 2009, pp. 1-9.

164 Dionne, D., Michalska, Rabbath, C., Cost-equivalencing discretization of a class of bang-bang guidance laws, *IEEE Trans-*

actions in Electronics and Aerospace Systems, Vol. 44, No.2, 2008, pp. 643-654.

163 Nasrallah, D., Michalska, H., Angeles, J., Controllability and posture control of a wheeled pendulum moving on an inclined plane, *IEEE Transcations on Robotics*, Vol. 23, No. 3., 2007, pp. 564-577.

162 Ahmadi, M., Michalska, H., Buehler, M., Control and stability analysis of limit cycles in a hopping robot, *IEEE Transcations on Robotics*, Vol. 23, No. 4., 2007, pp. 553-563.

161 Dionne, D., Michalska, H., Rabbath, C., Predictive guidance for pursuit-evasion engagements involving multiple decoys, *Journal of Guidance, Control, and Dynamics*, Vol. 30, No. 5, 2007, pp. 1277-1286.

160 Cadotte, P., Mannor, S., Michalska, H., Boulet, B., Design of l_1-optimal controllers with flexible disturbance rejection level, *IEEE Transactions on Automatic Control*, Vol. 51, Issue 5, 2006, pp. 868-873.

159 Dionne, D., Michalska, H., Oshman, Y., Shinar, J., Novel adaptive generalized likelihood ratio detector with application to maneuvering target tracking, *The AIAA Journal of Guidance, Control, and Dynamics*, Vol. 29, no. 2, 2006, pp. 465-474.

158 Dionne, D., Michalska, H., Shinar, J., Oshman, Y., Decision-directed adaptive estimation and guidance for an interception endgame, *The AIAA Journal of Guidance, Control, and Dynamics*, Vol. 29, no. 4, 2006, pp. 970-980.

157 Michalska, H., Lu, M-C., Gradient and generalized Newton algorithm for delay identification in linear hereditary systems, *WSEAS Transactions on Systems*, ISSN 1109-2777, Issue 5, Vol. 5, May 2006, pp. 905-912.

156 Michalska, H., Lu, M-C., Design of receding horizon stabilizing feedback control for systems with multiple time delays, *WSEAS Transactions on Systems*, ISSN 1109-2777, Issue 10, Vol. 5, October 2006, pp. 2277-2284.

155 Torres-Torriti, M., Michalska, H., A software package for Lie algebraic computations, *Society of Industrial and Applied Mathematics (SIAM) Review*, Vol. 47, No. 4., 2005, pp. 722-745.

154 Dionne, D., Michalska, H., An adaptive proportional navigation guidance law for interception of a meneuvering target, *Transcations of the CSME*, Vol. 29, No. 2, 2005, pp. 195-209.

153 Cadotte, P., Michalska, H., Boulet, B., Robust stability analysis of an electronic circuit system with l_∞ performance objectives and repeated perturbations, *WSEAS Transactions on Systems*, ISSN 1109-2777, Vol. 6., Issue 4., June 2005, pp. 726-735.

152 Hadzagic, M., Michalska, H., Lefebvre, E., Track-before-detect methods in tracking low observable targets: a survey, *Sensors & Transducers Magazine*, Vol. 8, 2005, pp. 374-380.

151 Dionne, D., Michalska, H., Integrated state estimation and guidance for target interception, in *"Data Fusion for Situation Monitoring, Incident detection, Alert and response management*, eds. Shahbazian E., Valin, P., *NATO Science Series*

II: Mathematics, Physics, and Chemistry, Vol. 198, ISBN 1-58603-536-3, ISO Press, 2005, pp. 597-612.

150 Michalska, H., Dionne, D., Adaptive, variable structure, multiple model estimation, in *Data Fusion for Situation Monitoring, Incident detection, Alert and response management*, eds. Shahbazian E., Valin, P., *NATO Science Series II: Mathematics, Physics, and Chemistry*, Vol. 198, ISBN 1-58603-536-3, ISO Press, Amsterdam, 2005, pp. 613-626.

149 Boily, D., Michalska, H., A new genetic algorithm for global optimization of resources in naval warfare, in *Data Fusion for Situation Monitoring, Incident detection, Alert and response management*, eds. Shahbazian E., Valin, P., *NATO Science Series II: Mathematics, Physics, and Chemistry*, Vol. 198, ISBN 1-58603-536-3, ISO Press, 2005, pp. 143-170.

148 Cadotte, P., Michalska, H., Boulet, B., Design of a robust controller for a heat exchanger system with l_∞ performance objectives and repeated uncertainties, *WSEAS Transactions on Systems*, ISSN 1109-2777, Vol. 3, Issue 5, July 2004, pp. 2092-2097.

147 Michalska, H., Torres-Torriti, M., Feedback stabilisation of strongly nonlinear systems using the Campbell-Baker-Hausdorff formula, *The International Journal of Control*, Vol. 77, No. 6, 2004, pp. 562-571.

146 Dionne, D., Michalska, H., A multiple reference Generalized Likelihood Ratio state estimator for hybrid systems, *WSEAS Transactions on Circuits and Systems*, ISSN 1109-2734, Vol. 3, Issue 3, May 2004, pp. 711-716.

145 Duan, Y., Boulet, B., Michalska, H., Design of robust SISO controllers for stable plants using FIR Q parameters, *WSEAS Transactions on Circuits and Systems*, ISSN 1109-2734, Vol. 3, Issue 3, 2004, pp. 640-646.

144 Haurani, A., Michalska, H., Boulet, B., Robust output stabilization of uncertain time-varying state-delayed systems with saturating actuators, *The International Journal of Control*, Vol. 77, No. 4, 2004, pp. 399-414.

143 Michalska, H., Torres-Torriti, M., A geometric approach to feedback stabilization of nonlinear systems with drift, *Systems and Control Letters*, Vol. 50, 2003, pp. 303-318.

142 Michalska, H., Jouan, A., Jarry, B., An IMM-JVC algorithm for tracking targets in clutter, in ıData Fusion, eds. Hyder, A. K., Shahbazian E., *NATO Science Series in Applications of Mathematics, Physics, and Chemistry*, Vol. 70, Kluwer Academic Publishers; ISBN 1-4020-0722, 2001, pp. 581-592.

141 Michalska, H., A min-max approach to set point stabilization for a class of drift-free systems, *European Journal of Control*, Vol. 1, No. 1, 1998, pp. 32-48.

140 Michalska, H., Rehman, F., Guiding functions and discontinuous control: the underwater vehicle example, *The International Journal of Control*, Vol. 69, No. 1, 1998, pp. 1-30.

139 Michalska, H., A new formulation of receding horizon stabilizing control without terminal constraint on the state, *European Journal of Control*, Vol.3, No. 1, 1997, pp. 2-14.

138 Michalska, H., Rehman, F., Stabilization of a class of nonlinear systems through Lyapunov function decomposition, *The International Journal of Control*, Vol. 67, No. 3, 1997, pp. 381-409.

137 Michalska, H., Mayne, D.Q., Moving horizon observers and observer based control, *IEEE Transactions on Automatic Control*, Vol. 42, 1995, pp. 995-1006.

136 Michalska, H., Vinter, R., Nonlinear stabilization using discontinuous moving-horizon control, *IMA Journal of Mathematical Control & Information*, Vol. 11, 1994, pp. 321-340.

135 Mayne, D.Q., Michalska, H., Polak, E., An efficient algorithm for solving semi-infinite inequality problems with box constraints, *Journal of Applied Mathematics and Optimization*, Vol. 30, 1994., pp. 135-157.

134 Michalska, H., Mayne, D.Q., Robust receding horizon control of constrained nonlinear systems, *IEEE Transactions on Automatic Control*, 1993, Vol. 38, pp. 1623-1633.

133 Michalska, H., Mayne, D.Q., Receding horizon control of nonlinear systems without differentiability of the optimal value function, *System and Control Letters*, 1991, Vol. 16, pp. 123-130.

132 Michalska, H., Mayne, D.Q., Design of stabilizing control laws for smooth nonlinear systems, *International Journal of Control*, 1991, Vol. 53, pp. 541-558.

131 Mayne, D.Q., Michalska, H., Receding horizon control of nonlinear systems, *IEEE Transactions on Automatic Control*, 1990, Vol. AC-35, No. 5, pp. 814-824.

130 Michalska, H., Model reference control system design for norm-uncertain plants, *International Journal of Control*, 1987, Vol. 45, No. 2, pp. 439-452.

129 Michalska, H., Ellis, J.E., Roberts, P.D., Joint coordination method for the steady-state control of large scale systems, *International Journal of Systems Science* , 1985, Vol. 16, No. 5, pp. 605-618.

128 Ellis, J.E., Michalska, H., Roberts, P.D., Point measurements in the optimizing control of large-scale industrial processes, *Electronic Letters*, 1984, Vol. 20. No. 12, pp. 505-521.

Journal Articles in Review

127 Michalska, H., Hayward, V., Stabilization of low-order systems under quantized and relay state feedback, *Automatica*, 2012.

126 Castanos, F., Gromov, D., Hayward, V, Michalska, H., Implicit port-Hamiltonian systems, continuous and sampled-data models, *Systems and Control Letters*, 2012.

125 Castanos, F., Gromov, D., Hayward, V, Michalska, H., Symplectic integration of port-Hamiltonian systems, submitted to *Systems and Control Letters*, 2012.

124 Raouf, J., Michalska, H., Exponential stabilization of differential algebraic systems by controlled switching , submitted to *International Journal of Robust and Nonlinear Control*, 2012.

123 Michalska, H., Sensitivity of retarded functional differential equations to Banach space parameters, *The IMA Journal of Applied Mathematics*, Oxford University Press, 2012.

122 Michalska, H., Lu, M-C., Delay identification in nonlinear time delayed systems, *International Journal of Control*, 2012.

Full-Length Refereed Papers in Conference Proceedings

121 Farkhatdinov, I., Michalska, H., Berthoz, A., Hayward, V., Modeling verticality estimation during locomotion, *Proceedings of the 19th CISM-IFToMM Symposium on Robot Design, Dynamics, and Control (ROMANSY 2012)*, Paris, France, 2012, (6 pages).

120 Hadzagic, M., Michalska, H., A Bayesian inference approach for batch trajectory estimation, *Proceedings of the 14th International Conference on Information Fusion*, Print ISBN: 978-1-4577-0267-9 ; INSPEC Accession Number: 12177654; 2011, Chicago, IL, USA, pp. 1-8.

119 Raouf, J., Michalska, H., Robust stabilization of continuous-time switched linear systems", *Proceedings of the 18th Mediterranean Conference on Control and Automation*, MED'10, Marrakech, Morocco, 2010, pp. 1235-1240.

118 Raouf, J., Michalska, H., Stabilization of switched linear systems with Wiener process disturbances, *Proceedings of the American Control Conference*, Baltimore, Maryland, USA, 2010, pp. 3281 - 3286.

117 Raouf, J., Michalska, H., Disturbance attenuation of uncertain switched systems by output feedback in application to vehicles, *Proceedings of INTER-NOISE 2010, The 39th International*

Congress on Noise Control Engineering, Lisbon, Portugal, 13-16 June, 2010, paper no. id 879 (10 pages).

116 Raouf, J., Michalska, H., Exponential stabilization of singular systems by controlled switching, *Proceedings of the 49rd IEEE Conference on Decision and Control*, Atlanta, Georgia, USA, 2010, pp. 414-419.

115 Raouf, J., Michalska, H., Robust stabilization of switched linear systems with Wiener process noise, *Proceedings of the 49rd IEEE Conference on Decision and Control*, Atlanta, Georgia, USA, 2010, pp. 6493-6498.

114 Xijnjilefu, X., Hayward, V., Michalska, H., Stabilization of the spatial double inverted pendulum using stochastic programming seen as a model of standing postural control, to appear in *Proceedings of the 9th IEEE-RAS International Conference on Humanoid Robots*, Paris, France, 2009, pp. 367-372.

113 Michalska, H., Hayward, V., On signum feedback stabilization of second and third-order systems , *Proceedings of the 48rd IEEE Conference on Decision and Control*, Shanghai, China, 2009, pp. 40684074.

112 Raouf, J., Michalska, H., Exponential stabilization of switched linear systems , *Proceedings of the 48rd IEEE Conference on Decision and Control*, Shanghai, China, 2009, pp. 1926-1931.

111 Raouf, J., Michalska, H., Robust exponential stabilization of switched linear systems, *Proceedings of the 48rd IEEE Conference on Decision and Control*, Shanghai, China, 2009, pp. 4246-4251.

110 Michalska, H., Hayward, V., Quantized and sampled control of linear second order systems, *European Control Conference*, Budapest, Hungary, 2009, pp. 531-536.

109 Raouf, J., Michalska, H., Robust stabilization of switched systems by H-infinity output feedback controller. *Proceedings of the 38th International Congress on Noise Control Engineering, INTER-NOISE 2009* , Ottawa, ON, Canada, 2009, paper. no. in09-929 (6 pages).

108 Raouf, J., Michalska, H., Disturbance attenuation in uncertain switched linear systems, *Proceedings of the 38th International Congress on Noise Control Engineering, INTER-NOISE 2009*, Ottawa, ON, Canada, 2009, paper. no. in09-930 (6 pages).

107 Raouf, J., Michalska, H., Disturbance attenuation in switched linear systems, *Proceedings of the International Symposium on Active Control of Sound and Vibration, ACTIVE 2009*, Ottawa, ON, Canada, 2009, paper no. ac09-927 (6 pages) .

106 Raouf, J., Michalska, H., Stabilization of switched linear systems by H-infinity feedback controller , *Proceedings of the International Symposium on Active Control of Sound and Vibration, ACTIVE 2009*, Ottawa, ON, Canada, 2009, paper no. ac09-941 (6 pages).

105 Raouf, J., Michalska, H., Robust output feedback controllers for switched linear systems, *European Control Conference*, Budapest, Hungary, 2009, pp. 2079-2084.

104 Tabandeh, S., Michalska, H., Stochastic learning of the optimum bid in auction markets , *Proceedings of the International Conference on Financial Engineering, World Congress of Engineering*, London, U.K., 2009, pp. 1325-1330.

103 Tabandeh, S., Michalska, H., An evolutionary random search algorithm for double auction markets, *Proceedings of the IEEE Congress on Evolutionary Computation, CEC 2009* , DOI 10.1109/CEC.2009.4983314, Trondheim, Norway, 2009, pp. 2948 - 2955.

102 Hadzagic, M., Michalska, H., Grenier, D., Evaluation of the integrated Orstein-Uhlenbeck process in application to ship track estimation, *Proceedings of the 10th IASTED International Conference on Signal and Image Processing*, Kailua-Kona, HI, USA, 2008, pp. 205-210.

101 Ganine, V., Legrand, M., Michalska, H., Pierre, C., A reduction technique for mistuned bladed disks with superposition of large geometric mistuning and small model uncertainties. *Proceedings of the 12-th International Symposium on Transport Phenomena and Dynamics of Rotating Machinery*, Honolulu, HI, USA, 2008, pp. 2008-2015.

100 Michalska, H., Sensitivity of retarded functional differential equations to Banach Space parameters, *Proceeding of the International Conference on Engineering and Mathematics (ENMA 2006)*, Bilbao, Spain, 2006, pp. 177-184.

99 Michalska, H., Lu, M-C., Delay identification in nonlinear differential difference systems, *Proceeding of the 45th IEEE Con-*

ference on Decision and Control, San Diego, CA, USA, December, 2006, pp. 2553-2558.

98 Cadotte, P., Mannor, S., Michalska, H., Boulet, B., Design of l_1-optimal controllers with flexible disturbance rejection level, *Proceedings of the American Control Conference*, Minneapolis, MN, USA, 2006, pp. 1700-1705.

97 Dionne, D., Michalska, H., Rabbath, C. A., A predictive guidance law with uncertain information about the target state, *Proceedings of the American Control Conference*, Minneapolis, MN, USA, 2006, pp. 1062 - 1067.

96 Nasrallah, D., Michalska, H., Angeles, J., Robust posture control of a mobile wheeled pendulum moving on an inclined plane, *Proceeding of the 3rd International Conference on Informatics in Control, Automation & Robotics (ICINCO 2006)*, Setúbal, Portugal, 2006, 6 pages on CD.

95 Michalska, H., Lu, M-C., Delay identification in linear differential difference systems, *Proceeding of the 8th WSEAS International Conference on Automatic Control, Modeling, and Simulation*, Prague, Czech Republic, 2006, pp. 297-304.

94 Michalska, H., Lu, M-C., Receding horizon control of differential difference systems with multiple delay parameters, *Proceeding of the 10th WSEAS International Conference on Systems*, Athens, Greece, 2006, Paper ID: 594-192 (6 pages on

93 Duan, Y., Boulet, B., Michalska, H., An alternative to DK iteration for two-block μ-synthesis: UQIT, *Proceedings of the 8th*

IASTED International Conference on Control and Applications, Montreal, QC, Canada, ISBN: 0-88986-596-5, 2006, Paper ID: 529-111 (6 pages on CD).

92 Nasrallah, D.S., Angeles, J., Michalska, H., Velocity and orientation control of an anti-tilting mobile robot moving on an inclined plane, *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA)*,ISBN 0-7803-9506-9, Orlando, FL, USA, 2006, pp. 3717-3723.

91 Nasrallah, D.S., Angeles, J., Michalska, H., The largest feedback-linearizable subsystem of a class of wheeled robots moving on an inclined plane, *Proceedings of the 16th CISM-IFToMM Symposium on Robot Design, Dynamics and Control (RoManSy)*, Warsaw, Poland, 2006, (6 pages on CD).

90 Nasrallah, D.S., Angeles, J., Michalska, H., Position and orientation control of a mobile wheeled pendulum moving on an inclined plane, *Proceedings of the IEEE International Conference on Mechatronics*,1-4244-9713-4m Budapest, Hungary, 2006, (6 pages).

89 Cadotte, P., Dionne, D., Michalska, H., A robust output-feedback guidance law for homing missiles using l_1 norm optimization theory, *Proceedings of the IEEE Conference on Control Applications*, Toronto, ON, Canada, 2005, pp. 1343-1348.

88 Dionne, D., Michalska, H., An adaptive GLR estimator for state estimation of a maneuvering target", *Proceedings of the American Control Conference*, Portland, OR, USA, 2005, pp. 333-338.

87 Cadotte, P., Michalska, H., Boulet, B., Computational aspects of a criterion for robust l_∞ stability of systems with repeated perturbations, *Proceedings of the American Control Conference*, Portland, OR, USA, 2005, pp. 4301-4302.

86 Cadotte, P., Michalska, H., Boulet, B., An improved sufficient condition for robust l_∞ stability of systems with repeated perturbations, *Proceedings of the American Control Conference*, Portland, OR, USA, 2005, pp. 3409-3414.

85 Cadotte, P., Michalska, H., Boulet, B., Robust l_∞ stability analysis of systems with repeated perturbations: a case study, *Proceedings of the WSEAS International Conference on Systems*, Athens, Greece, (6 pages on CD-ROM), 2005.

84 Nasrallah, D., Angeles, J., Michalska, H., Modelling of an anti-tilting outdoor mobile robot", *Proceedings of the 5th International Conference on Multi-body Systems, Nonlinear Dynamics, and Control, (ASME 2005)*, DETC2005-85098, Long Beach, CA, USA, (6 pages), 2005.

83 Jolicoeur, M. P., Roumy, J. G., Vanreusel, S., Dionne, D., Douville, H., Boulet, B., Michalska, H, Masson, P, Berry, A., Reduction of structure-borne noise in automobiles by multi-variable feedback, *Proceedings of the IEEE Conference on Control Applications*, Toronto, ON, Canada, 2005, pp. 1397-1402.

82 Cadotte, P., Michalska, H., Boulet, B., A necessary condition for robust l_∞ stability of systems with repeated perturbations, *Proceedings of the 43rd IEEE Conference on Decision and Control*, Atlantis, Paradise Island, The Bahamas, 2004, pp. 1352-1357.

81 Cadotte, P., Michalska, H., Boulet, B., Design of a robust controller for a heat exchanger system with l_∞ performance objectives and repeated uncertainties, *Proceedings of the 8th WSEAS International Conference on Systems*, Athens, Greece, 2004, Paper Ref. 487-465 (6 pages).

80 Nasrallah, D., Angeles, J., Michalska, H., Modeling of a two wheeled robot moving on an uneven road profile, *Proceedings of the 15th CISM-IFToMM Symposium on Robot Design, Dynamics and Control (ROMANSY Conference)*, Montreal, QC, Canada, 2004, Session 4, paper no. 04-23.

79 Haurani, A., Michalska, H., Boulet, B., Delay-dependent robust output feedback stabilization of retarded systems with actuator saturation, *Proceedings of the American Control Conference*, Boston, MA, USA, 2004, pp. 4963 - 4965.

78 Dionne, D., Michalska, H., A multiple reference GLR state estimator for hybrid systems, *Proceedings of the 4th WSEAS International Conference on Instrumentation, Measurement, Control, Cicuits and Systems*, Miami, FL, USA, 2004, Paper Ref. 484-360 (6 pages).

77 Duan, Y., Boulet, B., Michalska, H., Design of robust SISO controllers for stable plants using FIR Q parameters, *Proceedings of the 4th WSEAS International Conference on Instrumentation, Measurement, Control, Cicuits and Systems*, Miami, FL, USA, 2004, Paper Ref. 484-387 (6 pages).

76 Dionne, D., Michalska, H., An Adaptive multiple reference GLR state estimator for hybrid systems, *Proceedings of the International Conference on Computing, Communications and*

Control Technologies (CCCT 2004), Austin, TX, USA, 2004, (6 pages).

75 Michalska, H., Torres-Torriti, M., Nonlinear programming and the CBH formula in feedback stabilization of nonlinear systems with drift, *Proceeding of the IEEE Conference on Decision and Control*, Maui, HI, USA, 2003, pp. 6066-6071.

74 Michalska, H., Torres-Torriti, M., A reachable set approach to feedback stabilization of nonlinear systems with drift, *Proceeding of the IEEE Conference on Decision and Control*, Maui, HI, USA, 2003, pp. 3633-3634.

73 Haurani, A., Michalska, H., Boulet, B., Delay-dependent finite-horizon time-varying bounded real lemma for uncertain linear neutral systems, *Proceeding of the American Control Conference*, Denver, CO, USA, 2003, pp. 1512-1517.

72 Haurani, A., Michalska, H., Boulet, B., Delay-dependent robust stabilization of uncertain neutral systems with saturating actuators, *Proceeding of the American Control Conference*, Denver, CO, USA, 2003, pp. 509-514.

71 Boulet, B., Duan, Y., Michalska, H., An LMI approach to IMC-based robust tunable control, *Proceeding of the American Control Conference*, Denver, CO, USA, 2003, pp. 821-826.

70 Haurani, A., Michalska, H., Boulet, Discrete-time robust H_∞ output feedback control of state delayed systems, *Proceeding of the 15th IFAC World Congress on Control and Automation*, Barcelona, Spain, 2002, 6 pages on a CD.

69 Torres-Torriti, A., Michalska, H., Stabilization of bilinear systems with unstable drift, *Proceeding of the American Control Conference*, Anchorage, AK, USA, 2002, pp. 3490-3491; *Best Presentation Award*.

68 Boulet, B., Duan, Y., Michalska, H., Some preliminary results for IMC-based robust tunable control, *Proceeding of the American Control Conference*, Anchorage, AK, USA, 2002, pp. FP10-3.

67 Hadzagic, M., Michalska, H., Jouan, A., IMM-JVC and IMM-JPDA for closely maneuvering targets, *Proceeding of the 35th ASILOMAR Conference on Signals, Systems, and Computers*, Monterey, CA, USA, 2001, pp. 1278-1282.

66 Michalska, H., Torres-Torriti, M., Time varying stabilising feedback control for nonlinear systems with drift, *Proceeding of the IEEE Conference on Decision and Control*, Tampa, FL, USA, 2001, pp. 1767-1768.

65 Haurani, A., Taha, O., Michalska, H., Boulet, B., Multivariable control of a paper coloring process: a case study, *Proceeding of the American Control Conference*, Arlington, VA, USA, 2001, pp. 2210-2215.

64 Jouan, A., Michalska, H., Jarry, B., Tracking closely maneuvering targets in clutter with an IMM-JVC algorithm, *Proceeding of the 3rd International Conference on Data Fusion*, Paris, France, 2000, pp. MoD2-10-16.

63 Michalska, H., Torres-Torriti, M., Time varying stabilising feedback design for bilinear systems, *Proceeding of the IASTED In-*

ternational Conference on Modeling, Identification and Control, Innsbruck, Austria, 2000, pp. 93-99.

62 Jarry, B., Jouan, A., Michalska, H., An IMM-JVC algorithm for multi-target tracking with asynchronous sensors, *Proceeding of the IASTED International Conference on Modeling, Identification and Control*, Innsbruck, Austria, 2000, pp. 603-609.

61 Michalska, H., Geometric and system decomposition techniques in application to control of a mobile robot with trailer, *Proceeding of the 7th Mediterranean Conference on Control and Automation*, Haifa, Israel, 1999, (13 pages on CD).

60 Michalska, H., "Decomposition and trajectory interception techniques in application to control of vehicles with velocity constraints, *Proceedings of the International IEEE/INRIA Conference on Advances in Vehicle Control and Safety AVCS'98*, Amiens, France, 1998, pp. 169-174.

59 Rehman, F.U., Michalska, H., Discontinuous feedback stabilization of wheeled mobile robots, *Proceedings if the 1997 IEEE Conference on Control Applications*, Hartford, CT, USA, 1997, pp. 167-172.

58 Michalska, H., A min-max approach to set point stabilization for a class of drift-free systems, *Proceedings of the 36th IEEE Conference on Decision and Control*, San Diego, CA, USA, 1997, pp. 2897-2902.

57 Michalska, H., Rehman, F.U., Time varying feedback synthesis for a class of non-homogeneous systems, *Proceedings of the*

36th IEEE Conference on Decision and Control, San Diego, CA, USA, 1997, pp. 4018-4019.

56 Michalska, H., Rehman, F.U., Set point stabilizing control for a mobile robot with trailer, *Proceedings of the 8th IEEE International Conference on Advanced Robotics ICAR'97*, Monterey, California, USA, 1997, pp. 373-378.

55 Rehman, F. U., Michalska, H., Geometric approach to feedback stabilization of a hopping robot in the flight phase, *Proceedings of the 8th IEEE International Conference on Advanced Robotics ICAR'97*, Monterey, CA, USA, 1997, pp. 551-556.

54 Michalska, H., Rehman, F.U., Steering nonholonomic mobile robots using a trajectory interception approach, *Proceedings of the European Control Conference*, Brussels, Belgium, 1997, vol. 3. Track A, pp. TH-M A1 (6 pages).

53 Michalska, H., Rehman, F.U., Attitude stabilization of a rigid spacecraft in actuator failure mode, *Postprints of the IFAC-IFIP-IMACS Conference on Control of Industrial Systems CIS'97*, Belfort, France, Elsevier, 1997, vol. 3, pp. 563-568.

52 Michalska, H., Rehman, F.U., Switching control of nonholonomic underwater vehicle, *Postprints of the IFAC-IFIP-IMACS Conference on Control of Industrial Systems CIS'97*, Belfort, France, Elsevier, 1997, vol. 3, pp. 537-542.

51 Michalska, H., Time varying stabilizing feedback for drift free systems via optimization on a Lie group, *Proceedings of the 35th IEEE Conference on Decision and Control*, Kobe, Japan, 1996, pp. 1700-1705.

50 Michalska, H., Rehman, F.U., Stabilizing feedback control for a nonholonomic underwater vehicle, *Proceedings of the 35th IEEE Conference on Decision and Control*, Kobe, Japan, 1996, pp. 973-974.

49 Michalska, H., Rehman, F.U., Discontinuous feedback stabilization using guiding functions: the fire truck example, *Proceedings of the 35th IEEE Conference on Decision and Control*, Kobe, Japan, 1996, pp. 1712-1713.

48 Michalska, H., Receding horizon stabilizing control without terminal constraint on the state, *Proceedings of the 35th IEEE Conference on Decision and Control*, Kobe, Japan, 1996, pp. 2608-2612.

47 Michalska, H., Ahmadi, M., Buehler, M., Vertical motion control of a hopping robot, *Proceedings of the IEEE International Conference on Robotics and Automation*, Minneapolis, MN, USA, 1996, pp. 2712-2717.

46 Michalska, H., Synthesis of time-varying stabilizing feedback for drift-free systems, *Proceedings of the 13th IFAC World Congress*, San Francisco, CA, USA, 1996, Vol. E, pp. 97-102.

45 Michalska, H., Rehman, F.U., Guiding functions in application to feedback control of a robotic platform, Proceedings of the IEEE International Conference on Robotics and Automation, Minneapolis, MN, USA, 1996, pp. 3161-3166.

44 Michalska, H., A new formulation of receding horizon stabilizing control, *Proceedings of the IEEE-SMC IMACS Conference*

on Computational Engineering in Systems Applications, Lille, France, 1996, pp. 315-320.

43 Michalska, H., Trajectory tracking control using the receding horizon strategy, *Proceedings of the IEEE-SMC IMACS Conference on Computational Engineering in Systems Applications*, Lille, France, 1996, pp. 298-303.

42 Michalska, H., A type of sliding mode control for nonlinear systems without drift, *Proceedings of the 34th IEEE Conference on Decision and Control*, New Orleans, LA, USA, 1995, pp. 2107-2108.

41 Michalska, H., A guiding function approach to stabilization of a class of nonlinear systems, *Proceedings of the 34th IEEE Conference on Decision and Control*, New Orleans, USA, 1995, pp. 4231-4232.

40 Michalska, H., Hierarchical approach to set point control of a chained system, *Postprints of the 7th IFAC Symposium on Large Scale Systems: Theory and Applications*, London, U.K., 1995, Vol. 1, pp. 355-360.

39 Michalska, H., De Robillard, A., Switching strategies for stabilization of a class of nonlinear systems, *Proceedings of the 3nd IEEE Symposium on New Directions in Control and Automation*, Limassol, Greece, 1995, Vol. 2, pp. 387-394.

38 Michalska, H., Rehman, F.U., Relay and time delay in set point control of drift free systems, *Proceedings of the 3nd IEEE Symposium on New Directions in Control and Automation*, Limassol, Greece, 1995, Vol. 2, pp. 379-386.

37 Michalska, H., Approximate tracking for nonholonomic chains of order one, *Proceedings of the 2nd IEEE Symposium on New Directions in Control and Automation*, Chania, Greece, 1994, pp. 174-181.

36 Michalska, H., Mayne, D.Q., Goodwin, G.C., Constrained adaptive control: a differential game approach, *Proceedings of the 33rd IEEE Conference on Decision and Control*, Lake Buena Vista, FL, USA, 1994, pp. 1672-1673.

35 Mayne, D.Q., Michalska, H., Adaptive receding horizon control of linear constrained systems with inaccessible states, *Proceedings of the American Control Conference*, Baltimore, MD, USA, 1994, pp. 2685-2689.

34 Mayne, D.Q., Michalska, H., Adaptive receding horizon control for constrained nonlinear systems, *Proceedings of the 32nd IEEE Conference on Decision and Control*, San Antonio, TX, USA, 1993, pp. 1286-1291.

33 Mayne, D.Q., Michalska, H., Adaptive receding horizon control, *Proceedings of the European Control Conference*, Groningen, The Netherlands, 1993, pp. 182-185.

32 Michalska, H., A gradient flow as a nonlinear observer, *Proceedings of the European Control Conference*, Groningen, The Netherlands, 1993, pp. 402-405.

31 Michalska, H., An observer for nonlinear descriptor systems of index one, *Proceedings of the International Symposium on Implicit and Nonlinear Systems SINS'92*, Fort Worth, Texas, TX, USA, 1992, pp. 372-379.

30 Mayne, D.Q., Michalska, H., Moving horizon observer based control, *Proceedings of the 31th IEEE Conference on Decision and Control*, Tucson, AZ, USA, 1992, pp. 1512-1517.

29 Michalska, H., Mayne, D.Q., Moving horizon observers, *Proceedings of the IFAC Nonlinear Control Systems Design Symposium NOLCOS'92*, Bordeaux, France, 1992, pp. 576-581.

28 Mayne, D.Q., Michalska, H., Robustness of the implementable receding horizon controller, *Proceedings of the 30th IEEE Conference on Decision and Control*, Brighton, U.K., 1991, pp. 64-69.

27 Vinter, R.B., Michalska, H., Receding horizon control for nonlinear time-varying systems, *Proceedings of the 30th IEEE Conference on Decision and Control*, Brighton, U.K., 1991, pp. 75-76.

26 Mayne, D.Q., Michalska, H., Model predictive control of nonlinear systems , *Proceedings of the American Control Conference*, Boston, MA, USA., 1991, pp. 2343-2348.

25 Mayne, D.Q., Michalska, H., Receding horizon control of constrained nonlinear systems, *Proceedings of the European Control Conference*, Grenoble, France, 1991, pp. 2037-2042.

24 Michalska, H., Mayne, D.Q., Approximate global linearization of nonlinear systems via on-line optimization, *Proceedings of the European Control Conference*, Grenoble, France, 1991, pp. 182-187.

23 Mayne, D.Q., Michalska, H., Polak, E., An efficient outer approximation algorithm for solving infinite sets of inequalities,

Proceedings of the 29th IEEE Conference on Decision and Control, Honolulu, HI, USA, 1990, pp. 960-965.

22 Mayne, D.Q., Michalska, H., An implementable receding horizon controller for stabilization of nonlinear systems, *Proceedings of the 29th IEEE Conference on Decision and Control*, Honolulu, HI, USA, 1990, pp. 3396-3397.

21 Mayne, D.Q., Michalska, H., Receding horizon control of nonlinear systems, *Proceedings of the 28th IEEE Conference on Decision and Control*, Tampa, FL, USA, 1989, pp. 107-108.

20 Mayne, D.Q., Michalska, H., Receding horizon control of nonlinear systems, *Proceedings of the 27th IEEE Conference on Decision and Control*, Austin, TX, USA, 1988, pp. 464-465.

19 Ellis, J.E., Michalska, H., Roberts, P.D., Adaptive models in decentralized optimizing control, *Preprints of the 4th IFAC/IFORS Symposium on "Large Scale Systems, Theory and Applications*, Zurich, Switzerland, 1986.

18 Ellis, J.E., Michalska, H., Roberts, P.D., The joint coordination method with application to the on-line steady-state control of non-standard problem, *Preprints of the 1st European Workshop on the "Real Time Control of Large Scale Systems"*, University of Patras, Patras, Greece, 1984.

17 Ellis, J.E., Michalska, H., Roberts, P.D., Coordinated, decentralized, integrated optimization and parameter estimation of large-scale processes, *Preprints of the 9th World Congress of the IFAC* , Budapest, Hungary, 1984.

16 Findeisen, W., Brdys, M., Frelek, B., Michalska, H., Hierarchical structure design for decision making and control in large-scale water management systems - a case study, *Preprints of the IFAC/IFORS Symposium on "Large Scale Systems, Theory and Applications"*, Warsaw, Poland, 1983.

15 Findeisen, W., Brdys, M., Frelek, B., Michalska, H., Modelling of water resource systems for control purposes, (in Russian; original title: "Modelirovanye vodnohozyaystvyennoy sistemy dla operativnovo upravlenya") , *Conference on Mathematical and Computer Modelling for Decision Making Purposes*, organised by MNIIPU, Moscow, USSR, 1982.

Invited Papers which Appeared in Print

14 Dionne, D., Michalska, H., Oshman, Y., Terminal missile guidance using a Semi-Markov target model, *Proceedings of the 16th IFAC Symposium on Automatic Control in Aerospace*, St. Petersburg, Russia, 2004, Vol. 2, (in Invited session on: New Trends in Guidance of Ballistic Missiles), pp. 56-61.

13 Michalska, H., Dionne, D., State estimation and guidance for target interception, *NATO Advanced Study Institute Workshop on Data Fusion for Situation Monitoring and Detection*, Yerevan, Armenia, 2003.

12 Michalska, H., Dionne, D., Adaptive multiple model state estimation and detection, *NATO Advanced Study Institute Workshop on Data Fusion for Situation Monitoring and Detection*, Yerevan, Armenia, 2003.

11 Michalska, H., Joan, A., Jarry, B., An enhanced IMM-JVC algorithm for multi-target tracking, *NATO Advanced Study Institute Workshop on Multi-Sensor Data Fusion*, Pitlochry, UK, 2000.

10 Michalska, H., Discontinuous receding horizon control with state constraints, *Proceedings of the American Control Conference*, invited paper in the session on Nonlinear and Adaptive Flight Control, Seattle, USA, 1995, pp. 3500-3504.

9 Michalska, H., Trajectory tracking control using the receding horizon strategy, *Proceedings of the International Workshop on Predictive and Receding Horizon Control*, Seoul, Korea, 1995, pp. 1-12.

8 Michalska, H., A new formulation and convergence properties of receding horizon stabilizing control without terminal constraint on the state, *Proceedings of the International Workshop on Predictive and Receding Horizon Control*, Seoul, Korea, 1995, pp. 125-139.

Other Conference Papers

7 Michalska, H., Nonlinear observers using least squares solution to nonlinear operator equations, *SIAM Conference on Control and its Applications*, Minneapolis, MN, USA, 1992.

6 Hadzagic, M., Lefebvre, E., Michalska, H., On data fusion challenges and architectures in maritime surveillance, REPARTI Colloquium in Distributed Intelligent Systems, May 31, 2007, McGill University, 2007.

5 Tabandeh, S., Michalska, H., Random search learning in double auction markets, *SIAM Conference on Financial Mathematics and Engineering*, New Brunswick, NJ, USA, 2008.

4 Tabandeh, S., Michalska, H., Mesh-free solutions to PDEs by stochastic programming, *SIAM Conference on Computational Science and Engineering*, Miami, FL, USA, 2009.

3 Tabandeh, S., Michalska, H., Stochastic learning of the optimum bid in auction markets, *GERAD, Optimization Days*, Montreal, QC, Canada, 2009.

2 Tabandeh, S., Michalska, H., Levy flight and simulated annealing for learning in games, *GERAD, Optimization Days*, Montreal, QC, Canada, 2009.

Book Chapter

1 Mayne, D.Q., Michalska, H., Optimization in control design, in *"CAD for Control Systems"*, D.A. Linken, eds., New York, Marcel Dekker Inc., 1992, pp. 341-365.

Prestigeous Invited Lectures

P1 Michalska, H., Lyapunov function independent approaches to stabilization of under-actuated nonlinear systems, *IFAC Celebration: "50 years of Nonlinear Control and Optimization"*, September 30 - October 1, 2010, *The Royal Society*, London, United Kingdom.