

Publications Template

List of Publications

1. Journal Papers:

- [1] **Hamdy, M.**, Ibrahim, A., Abozalam, B., Helmy, S.; Maximum Power Point Tracking for Solar Photovoltaic System Based on Interval Type-3 Fuzzy Logic: Practical Validation, *Electric Power Components and Systems*, Vol. 51, Issue 10, pp. 1009-1026, 2023, Taylor & Francis.
- [2] Abdelhaleem, S.; Soliman, M.; **Hamdy, M.**; Design of EID estimator based modified repetitive control with adaptive periodic event-triggered for time-varying delay nonlinear systems, *International Journal of Robust and Nonlinear Control*, Published online 30 November 2022, John Wiley & Sons.
- [3] Abdelhaleem, S.; Soliman, M.; **Hamdy, M.**; Periodic event-triggered modified repetitive control with equivalent-input-disturbance estimator based on T-S fuzzy model for nonlinear systems, *Soft Computing*, Vol. 26, pp. 6443–6459, 2022, Springer.
- [4] Helmy, S.; Magdy, M.; **Hamdy, M.**; Control in the loop for synchronization of nonlinear chaotic systems via adaptive intuitionistic neuro-fuzzy: a comparative study, *Complex & Intelligent Systems*, Vol. 8, pp. 3437–3450, 2022, Springer.
- [5] Abdelhaleem, S.; Soliman, M.; **Hamdy, M.**; Modified Repetitive Periodic Event-Triggered Control with Equivalent-Input-Disturbance for linear systems subject to unknown Disturbance, *International Journal of control*, Vol. 95, Issue 7, pp. 1825–1837, 2022, Taylor & Francis.
- [6] **Hamdy, M.**; Magdy, M.; Helmy, S.; Control and Synchronization for two Chua Systems Based on Intuitionistic Fuzzy Control Scheme: A Comparative Study, *Transactions of the Institute of Measurement and Control*, Vol. 43, Issue 7, pp. 650–1667, April 2021, SAGE.
- [7] **Hamdy, M.**; Helmy, S.; Magdy, M.; Design of Adaptive Intuitionistic Fuzzy Controller for Synchronization of Uncertain Chaotic Systems, *CAAI Transactions on Intelligence Technology*, Vol. 5, Issue 4, pp. 237–246, December 2020, IET.
- [8] **Hamdy, M.**; Shalaby, R.; Sallam, M.; Experimental verification of a hybrid control scheme with chaotic whale optimization algorithm for nonlinear gantry crane: A comparative study, *ISA Transactions*, Vol. 98, pp. 418–433, March 2020, Elsevier.

- [9] Yousef, H.A.; **Hamdy, M.**; Saleem, A.; Nashed, K.; Mesbah, M.; Shafiq, M.; Enhanced L_1 Adaptive Control for a Benchmark Piezoelectric-actuated System via Fuzzy Approximation, International Journal of Adaptive Control and Signal Processing, Vol. 33, Issue 9, pp. 1329–1343, September 2019, John Wiley & Sons.
- [10] **Hamdy, M.**; Ramadan, A.; Abozalam, B.; A Novel Inverted Fuzzy Decoupling Scheme for MIMO Systems with Disturbance: A Case Study of Binary Distillation Column, Journal of Intelligent Manufacturing, Vol. 29, Issue 8, pp. 1859–1871, December 2018, Springer.
- [11] **Hamdy, M.**; Shalaby, R.; Sallam, M.; A Hybrid Partial Feedback Linearization and Deadbeat Control Scheme for a Nonlinear Gantry Crane, Journal of the Franklin Institute, Vol. 355, Issue 14, pp. 6286–6299, September 2018, Elsevier.
- [12] **Hamdy, M.**; Abdelhaleem, S.; Fkirin, M.A.; Adaptive Fuzzy Predictive Controller for a Class of Networked Nonlinear Systems with Time-Varying Delay, IEEE Transaction on Fuzzy Systems, Vol. 26, Issue 4, pp. 2135-2144, August 2018, IEEE.
- [13] **Hamdy, M.**; Ramadan, A.; Abozalam, B.; Comparative Study of Different Decoupling Schemes for TITO Binary Distillation Column via PI Controller, IEEE/CAA Journal of Automatica Sinica, Vol. 5, No. 4, pp. 869-877, July 2018, IEEE.
- [14] **Hamdy, M.**; Abdelhaleem, S.; Fkirin, M.A.; Time-Varying Delay Compensation for a Class of Nonlinear Control Systems over Network via H^∞ Adaptive Fuzzy Controller, IEEE Transactions on Systems, Man, and Cybernetics: Systems, Volume 47, Issue 8, pp. 2114-2124, August 2017, IEEE.
- [15] **Hamdy, M.**; Abdelhaleem, S.; Fkirin, M. A.; Design of Adaptive Fuzzy Control for a Class of Networked Nonlinear Systems, Journal of Dynamic Systems Measurement and Control- Transaction of ASME, Vol. 139, No. 3, pp. 031008-031008-9, March 2017, ASME.
- [16] Yousef, H.A.; **Hamdy, M.**; Nashed, K.; L_1 Adaptive fuzzy controller for a class of nonlinear systems with unknown backlash-like hysteresis, International Journal of Systems Science, Volume 48, Issue 12, pp. 2522-2533, 2017, Taylor & Francis.
- [17] **Hamdy, M.**; Ramadan, A.; Design of Smith Predictor and Fuzzy Decoupling for MIMO Chemical Processes with Time Delays, Asian Journal of Control, 19 (1), 57–66, 2017, John Wiley & Sons.
- [18] **Hamdy, M.**; Hamdan, I.; Non-fragile controller design for a class of multivariable bilinear systems, IMA Journal of Mathematical Control and Information, 33 (2), 441-455, 2016, Oxford Journals.
- [19] **Hamdy, M.**; Hamdan, I.; Robust fuzzy output feedback controller for affine nonlinear systems via T-S fuzzy bilinear model: CSTR benchmark, ISA Transactions, 57, 85–92, 2015, Elsevier.

- [20] **Hamdy, M.**; Hamdan, I.; A new calculation method of feedback controller gain for bilinear paper-making process with disturbance, *Journal of Process Control* 24(9), 1402–1411, 2014, Elsevier.
- [21] **Hamdy, M.**; EL-Ghazaly, G.; Adaptive neural decentralized control for strict feedback nonlinear interconnected systems via backstepping, *Neural Computing and Applications*, 24 (2), 259-269, 2014, Springer.
- [22] Yousef, H.A.; **Hamdy, M.**; Shafiq, M.; Flatness-Based adaptive fuzzy output tracking excitation control for power system generators, *Journal of the Franklin Institute*, 350 (8), 2334–2353, 2013, Elsevier.
- [23] Yousef, H.A.; **Hamdy, M.**; Observer-based adaptive fuzzy control for a class of nonlinear time-delay systems, *International Journal of Automation and Computing* 10 (4), 275-280, 2013, Springer.
- [24] **Hamdy, M.**; State Observer based Dynamic Fuzzy Logic System Control for a Class of SISO Nonlinear Systems, *International Journal of Automation and Computing*, 10 (2), 118-124, 2013, Springer.
- [25] **Hamdy, M.**; EL-Ghazaly, G.; Extended dynamic fuzzy logic system for a class of MIMO nonlinear systems and its application to robotic manipulators, *Robotica*, 31, 251-265, 2013, Cambridge University Press.
- [26] Yousef, H.A.; **Hamdy, M.**; Shafiq, M.; Adaptive fuzzy based-tracking control for a class of strict-feedback SISO nonlinear time-delay systems without backstepping, *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems*, 20 (3), 339-353, 2012, World Scientific Publishing Company.
- [27] Yousef, H.; **Hamdy, M.**; El-Madbouly, E.; Robust adaptive fuzzy semi-decentralized control for a class of large-scale nonlinear systems using input–output linearization concept, *International Journal of Robust and Nonlinear Control*, 20 (1), 27-40, 2010, John Wiley & Sons.
- [28] Yousef, H.; **Hamdy, M.**; El-Madbouly, E.; Eteim, D.; Adaptive fuzzy decentralized control for interconnected MIMO nonlinear subsystems, *Automatica*, 45 (2), 456-462, 2009, Elsevier.
- [29] Yousef, H.; El-Madbouly, E.; Eteim, D.; **Hamdy, M.**; Adaptive fuzzy semi-decentralized control for a class of large-scale nonlinear systems with unknown interconnections, *International Journal of Robust and Nonlinear Control*, 16 (15), 687-708, 2006, John Wiley & Sons.
- [30] El-Madbouly, E.; Naguib, M; L. M. Farag; **Hamdy, M.**; Modeling and Fuzzy Control of The Preheater-Kiln Tower in Dry Process of Cement Industry, *Menoufia Journal of Electronic Engineering Research*, 12 (1), 141-156, 2002.

2. Conference Papers:

2.1 Foreign Conference Papers:

- [1] Yousef, H.A.; **Hamdy, M.**; Fuzzy observer-based adaptive control for a class of nonlinear systems with unknown time delays, The 38th Annual Conference of the IEEE Industrial Electronics Society, IECON'2012, 25-28 October 2012, ÉTS Montréal, Québec, Canada, IEEE.
- [2] Yousef, H.A.; **Hamdy, M.**; Adaptive Fuzzy Flatness-based Excitation Control for Power System Generators, The 38th Annual Conference of the IEEE Industrial Electronics Society, IECON'2012, 25-28 October 2012, ÉTS Montréal, Québec, Canada, IEEE.
- [3] **Hamdy, M.**; El-Ghazaly, G.; Ibrahim, M.; Adaptive Mamdani fuzzy backstepping control for a class of strict-feedback nonlinear time-varying delay systems, Proceeding of IFAC Workshop on Time-Delay Systems TDS, Prague, Czech Republic, 9, 1, 229-234, 2010.
- [4] Yousef, H.A.; **Hamdy, M.**; Shafiq, M.; Adaptive fuzzy control for strict-feedback nonlinear time-delay systems without backstepping scheme, 49th IEEE Conference on Decision and Control (CDC), 15-17 December, 2010, 3700-3705, Atlanta, Georgia.
- [5] Yousef, H.; El-Madbouly, E.; Eteim, D.; **Hamdy, M.**; Indirect Adaptive Fuzzy Decentralized Control for a Class of Large-Scale Nonlinear Systems with Unknown Interconnections, International Conference on Computational Intelligent (ICCI'04), Istanbul-Turkey, 17-19 December, 2004, pp. 314-317.

2.2 Internal Conference Papers:

- [6] Othman, A., Shatla H., **Hamdy, M.**; A Comparative Study of Auto-tuned PID Controller based on Different SMC Schemes for a DC Motor Speed Control: Practical Validation, The 23th International Middle East Power Systems Conference (MEPCON), Kafrelshiekh University, Egypt 13-15 December 2022.
- [7] **Hamdy, M.**; Hamdan, I.; Ibrahim, M.; Fuzzy PDC Controller for a Class of T-S Fuzzy Bilinear System via Output Feedback, The 2nd International Conference on Engineering and Technology (ICET 2014), April 19-20, 2014, German University, Cairo, Egypt.
- [8] **Hamdy, M.**; Hamdan, I.; Ibrahim, M.; Non-fragile Bilinear State Feedback Controller for a Class of MIMO Bilinear Systems, The 8th International Conference on Computer Engineering & Systems (ICCES), November 26-27, 146-151, 2013, Cairo, Egypt.
- [9] **Hamdy, M.**; El-Ghazaly, G.; Ibrahim, M.; Decentralized Adaptive Fuzzy Backstepping Control for a Class of Strict-Feedback Interconnected Nonlinear Systems, Proceeding of 1st International Conference on Electrical and Computer Systems Engineering ECSE'10, Cairo, Egypt, 2010.

- [10] **Hamdy, M.**; El-Ghazaly, G.; Ibrahim, M.; Adaptive Fuzzy Backstepping Control for a Class of Strict-Feedback Nonlinear Time-Varying Delays Systems: A Minimal Parameters Design Approach, Proceeding of 1st International Conference on Electrical and Computer Systems Engineering ECSE'10, Cairo, Egypt, 2010.
- [11] Yousef, H.; **Hamdy, M.**; Adaptive Mamdani fuzzy control for a class of nonlinear time-delays systems, IEEE International Conference on Computer Engineering & Systems (ICCES 2009), 121-126, 2009, Cairo, Egypt.
- [12] **Hamdy, M.**; El-Madbouly, H.; Improvement of QoS management in wireless sensor/actuator networks using fuzzy-genetic approach, IEEE International Conference on Networking and Media Convergence (ICNM 2009), 29-35, 2009, Cairo, Egypt.
- [13] Yousef, H.; El-Madbouly, E.; Eteim, D.; **Hamdy, M.**; Adaptive fuzzy semi-decentralized control for a class of large-scale nonlinear systems based on input-output linearization concept, IEEE International Conference on Computer Engineering & Systems (ICCES'07), 27-32, 2007, Cairo, Egypt.
- [14] Yousef, H.; El-Madbouly, E.; Eteim, D.; **Hamdy, M.**; Adaptive fuzzy decentralized control for a class of large-scale nonlinear systems with MIMO subsystems, IEEE The International Conference on Computer Engineering and Systems, , 27-32, 2006, Cairo, Egypt.
- [15] El-Madbouly, H.; **Hamdy, M.**; Call Admission Control for ATM System using Fuzzy Control Approach, IEEE The 6th International Workshop on System-on-Chip for Real-Time Applications, 62-65, 2006, Cairo, Egypt.
- [16] Yousef, H.; El-Madbouly, E.; **Hamdy, M.**; Direct adaptive fuzzy decentralized control for a class of large-scale nonlinear systems, IEEE International Conference on Electrical, Electronic and Computer Engineering (ICEEC'04), 19-22, 2004, Cairo, Egypt.