

Prof. Clarence W. DE SILVA

University of British Columbia, Canada

Selected Scholarly Contributions [Data Provided by **Scopus**]

Xia, M., Li, T., Zhang, Y., De Silva, C.W.

[Closed-loop design evolution of engineering system using condition monitoring through internet of things and cloud computing](#)

(2016) Computer Networks, 101, pp. 5-18.

Du, Y., De Silva, C.W., Cong, M., Liu, D., Qin, W.

[An integrated model of visual attention for homecare robot with self-awareness](#)

(2015) 2015 IEEE International Conference on Robotics and Biomimetics, IEEE-ROBIO 2015, art. no. 7419025, pp. 1752-1757.

Kim, D.W., Lee, H.-D., de Silva, C.W., Park, J.-W.

[Service-provider intelligent humanoid robot using TCP/IP and CORBA](#)

(2016) International Journal of Control, Automation and Systems, pp. 1-8. Article in Press.

Tabatabaei, S.K., Behbahani, S., De Silva, C.W.

[Self-adjusting multidisciplinary design of hydraulic engine mount using bond graphs and inductive genetic programming](#)

(2016) Engineering Applications of Artificial Intelligence, 48, pp. 32-39.

Saliba, M.A., De Silva, C.W.

[Quasi-dynamic analysis, design optimization, and evaluation of a two-finger underactuated hand](#)

(2016) Mechatronics, 33, pp. 93-107.

Samarakoon, B.L., Gamage, L.B., De Silva, C.W.

[Design evolution of engineering systems using bond graphs and genetic programming](#)

(2016) Mechatronics, 33, pp. 71-83.

Khoshnoud, F., Zhang, Y., Shimura, R., Shahba, A., Jin, G., Pissanidis, G., Chen, Y.K., De Silva, C.W.

[Energy Regeneration from Suspension Dynamic Modes and Self-Powered Actuation](#)

(2015) IEEE/ASME Transactions on Mechatronics, 20 (5), art. no. 7047911, pp. 2513-2524.

Abid, A., Khan, M.T., De Silva, C.W.

[Fault detection in mobile robots using sensor fusion](#)

(2015) 10th International Conference on Computer Science and Education, ICCSE 2015, art. no. 7250209, pp. 8-13.

Khoshnoud, F., Esat, I.I., De Silva, C.W.

[Bioinspired Psi intelligent control for autonomous vehicles](#)

(2015) 10th International Conference on Computer Science and Education, ICCSE 2015, art. no. 7250244, pp. 208-212.

Khan, M.T., Qadir, M.U., Nasir, F., De Silva, C.W.

[A framework for a fault tolerant multi-robot system](#)

(2015) 10th International Conference on Computer Science and Education, ICCSE 2015, art. no. 7250242, pp. 197-201.

Lu, L., Yan, J., De Silva, C.W.

[Dominant feature selection for the fault diagnosis of rotary machines using modified genetic algorithm and empirical mode decomposition](#)

(2015) Journal of Sound and Vibration, 344, pp. 464-483.

Khan, M.T., Qadir, M.U., Abid, A., Nasir, F., De Silva, C.W.

[Robot fault detection using an artificial immune system \(AIS\)](#)

(2015) Control and Intelligent Systems, 43 (2), pp. 107-117.

Tabatabaei, S.M.K., Behbahani, S., De Silva, C.W.

[Design evolution of an intelligent controller for chatter vibration using structured AIS](#)

(2015) Control and Intelligent Systems, 43 (2), pp. 88-94.

Khoshnoud, F., De Silva, C.W., Esat, I.I.

[Bioinspired PSI intelligent control for autonomous dynamic systems](#)

(2015) Control and Intelligent Systems, 43 (4), pp. 205-211.

Khan, M.T., Izhar, Nasir, F., Qadir, M.U., De Silva, C.W.

[Multi-robot cooperation framework based on artificial immune system](#)

(2015) Control and Intelligent Systems, 43 (3), pp. 159-167.

Qazi, A.J., De Silva, C.W., Khan, A., Khan, M.T.

[Performance analysis of a semiactive suspension system with particle swarm optimization and fuzzy logic control](#)

(2014) The Scientific World Journal, 2014, art. no. 174102, .

Behbahani, S., De Silva, C.W.

[Niching genetic scheme with bond graphs for topology and parameter optimization of a mechatronic system](#)

(2014) IEEE/ASME Transactions on Mechatronics, 19 (1), art. no. 6389779, pp. 269-277.

Zhang, Y., De Silva, C.W., Su, D., Xue, Y.

[Autonomous robot navigation with self-learning for collision avoidance with randomly moving obstacles](#)

(2014) Proceedings of the 9th International Conference on Computer Science and Education, ICCSE 2014, art. no. 6926440, pp. 117-122.

Li, T., De Silva, C.W., Mitra, S.

[Design of a self-tuning controller for local water quality adjustment](#)

(2014) Proceedings of the 9th International Conference on Computer Science and Education, ICCSE 2014, art. no. 6926457, pp. 218-222.

Wang, Y., Zhang, G.-L., Lang, H., Zuo, B., De Silva, C.W.

[A modified image-based visual servo controller with hybrid camera configuration for robust robotic grasping](#)

(2014) Robotics and Autonomous Systems, 62 (10), pp. 1398-1407.

Khan, M.T., De Silva, C.W.

[Autonomous and market-based fault tolerant algorithms for multi-robot cooperation](#)

(2014) Journal of Information Science and Engineering, 30 (2), pp. 483-500.

Du, Y., De Silva, C.W., Liu, D.

[A multi-agent hybrid cognitive architecture with self-awareness for homecare robot](#)

(2014) Proceedings of the 9th International Conference on Computer Science and Education, ICCSE 2014, art. no. 6926458, pp. 223-228.

Meng, L., De Silva, C.W., Zhang, J.

[3D visual SLAM for an assistive robot in indoor environments using RGB-D cameras](#)

(2014) Proceedings of the 9th International Conference on Computer Science and Education, ICCSE 2014, art. no. 6926426, pp. 32-37.

Tufail, M., De Silva, C.W.

[Impedance control schemes for bilateral teleoperation](#)

(2014) Proceedings of the 9th International Conference on Computer Science and Education, ICCSE 2014, art. no. 6926428, pp. 44-49.

Zhang, Y., Bhatt, R., De Silva, C.W.

[MKL-SVM-based human detection for autonomous navigation of a robot](#)

(2014) Proceedings of the 9th International Conference on Computer Science and Education, ICCSE 2014, art. no. 6926425, pp. 27-31.

Balkhair, H., De Silva, C.W.

[A systematic approach for functional decomposition of mechatronic system design using mechatronic design quotient \(MDQ\)](#)

(2014) Proceedings of the 9th International Conference on Computer Science and Education, ICCSE 2014, art. no. 6926443, pp. 135-139.

Khoshnoud, F., Lu, J., Zhang, Y., Folkson, R., De Silva, C.W.

[Suspension energy regeneration for random excitations and self-powered actuation](#)

(2014) Conference Proceedings - IEEE International Conference on Systems, Man and Cybernetics, 2014-January (January), art. no. 6974305, pp. 2519-2524.

Wang, Y., De Silva, C.W.

[An experimental setup for dynamics control of robot manipulators](#)

(2014) Proceedings of the 9th International Conference on Computer Science and Education, ICCSE 2014, art. no. 6926441, pp. 123-128.

Gao, S., De Silva, C.W.

[Formulation of a state-space model for a parallel manipulator using linear graphs](#)

(2014) Proceedings of the 9th International Conference on Computer Science and Education, ICCSE 2014, art. no. 6926444, pp. 140-146.

Maghsoud, P., De Silva, C.W., Khan, M.T.

[Autonomous and cooperative multirobot system for multi-object transportation](#)

(2014) Proceedings of the 9th International Conference on Computer Science and Education, ICCSE 2014, art. no. 6926456, pp. 211-217.

Lee, M.-F.R., Chiu, F.-H.S., De Silva, C.W., Shih, C.-Y.A.

[Intelligent navigation and micro-spectrometer content inspection system for a homecare mobile robot](#)

(2014) International Journal of Fuzzy Systems, 16 (3), pp. 389-399.

Xia, M., De Silva, C.W.

[A framework of design weakness detection through machine health monitoring for the evolutionary design optimization of multi-domain systems](#)

(2014) Proceedings of the 9th International Conference on Computer Science and Education, ICCSE 2014, art. no. 6926455, pp. 205-210.

Tabatabaei, S.M.K., Behbahani, S., De Silva, C.W.

[Mechatronic design for regenerative chatter control in turning using artificial immune system](#)

(2014) Proceedings of the 9th International Conference on Computer Science and Education, ICCSE 2014, art. no. 6926442, pp. 129-134.

Liu, D., Cong, M., Du, Y., Zhang, Y., De Silva, C.W.

[Visual attention servo control for task-specific robotic applications](#)

(2013) International Journal of Control, Automation and Systems, 11 (6), pp. 1241-1252.

De Silva, C.W., Xiao, S., Li, M., De Silva, C.N.

[Telemedicine - Remote sensory interaction with patients for medical evaluation and diagnosis](#)

(2013) Control and Intelligent Systems, 41 (4), pp. 266-277.

De Silva, C.W., Behbahani, S.

[A design paradigm for mechatronic systems](#)

(2013) Mechatronics, 23 (8), pp. 960-966.

De Silva, C.W., Pourazadi, S.

[Some generalisations of linear-graph modelling for dynamic systems](#)

(2013) International Journal of Control, 86 (11), pp. 1990-2005.

Liu, D., Cong, M., Du, Y., De Silva, C.W.

[GMM-based visual attention for target selection of indoor robotic tasks](#)

(2013) Industrial Robot, 40 (6), art. no. 17098921, pp. 583-596.

Tufail, M., De Silva, C.W.

[Haptic teleoperation using impedance control with application in homecare robotics](#)

(2013) Control and Intelligent Systems, 41 (3), pp. 178-184.

Voon, E.P., Kiong, T.K., Narayanan, A.S., De Silva, C.W., Yee, L.H.

[Development of digital pseudo binaural hearing aid](#)

(2013) Control and Intelligent Systems, 41 (3), pp. 161-168.

Khoshnoud, F., Sundar, D.B., Badi, M.N.M., Chen, Y.K., Calay, R.K., De Silva, C.W.

[Energy harvesting from suspension systems using regenerative force actuators](#)

(2013) International Journal of Vehicle Noise and Vibration, 9 (3-4), pp. 294-311.

Gamage, L., Perera, C., Zhang, F., Pulasinghe, K., Li, M., De Silva, C.W., Xi, B.

[Welcome to ICCSE](#)

(2013) Proceedings of the 8th International Conference on Computer Science and Education, ICCSE 2013, art. no. 6554168, p. 1.

Khan, M.T., De Silva, C.W.

[Multi-robot cooperation using an immune system model for multi-object transportation](#)

(2013) International Journal of Robotics and Automation, 28 (1), pp. 42-56.

Behbahani, S., De Silva, C.W.

[Automated identification of a mechatronic system model using genetic programming and bond graphs](#)

(2013) Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 135 (5), art. no. 051007, .

Ganji, M., Behbahani, S., De Silva, C.W.

[Integrated and object-oriented mechatronic modelling of piezoelectric transducers using linear graphs](#)

(2013) International Journal of Modelling and Simulation, 33 (1), pp. 15-24.

Narayanan, A.S., Cherk, L.W., Kiong, T.K., Huat, K.C., De Silva, C.W.

[A video conferencing solution for telehealth applications](#)

(2013) Control and Intelligent Systems, 41 (3), pp. 152-160.

Behbahani, S., De Silva, C.W.

[Mechatronic design evolution using bond graphs and hybrid genetic algorithm with genetic programming](#)

(2013) IEEE/ASME Transactions on Mechatronics, 18 (1), art. no. 6029337, pp. 190-199.

Khan, M.T., De Silva, C.W., Khan, A.

[Auction-based fault-tolerant multi-robot cooperation](#)

(2012) Proceedings of the IASTED International Conference on Engineering and Applied Science, EAS 2012, pp. 163-167.

Narayanan, A.S., Cherk, L.W., Kiong, T.K., Huat, K.C., De Silva, C.W.

[Development of a video streaming system for telehealth applications](#)

(2012) Proceedings of the IASTED International Conference on Engineering and Applied Science, EAS 2012, pp. 354-361.

Er, P.V., Tan, K.K., Lim, H.Y., Narayanan, A.S., De Silva, C.W.

[Development of hearing aids with frugal objectivity](#)

(2012) Proceedings of the IASTED International Conference on Engineering and Applied Science, EAS 2012, pp. 370-377.

Tufail, M., De Silva, C.W.

[Haptic teioperation using impedance control with application in homecare robotics](#)

(2012) Proceedings of the IASTED International Conference on Engineering and Applied Science, EAS 2012, pp. 341-346.

De Silva, C.W.

[Intelligent control](#)

(2012) Computational Complexity: Theory, Techniques, and Applications, 9781461418009, pp. 1619-1641.

De Silva, C.W.

[Linear-graph modeling paradigms for mechatronic systems](#)

(2012) International Journal of Mechanical Engineering Education, 40 (4), pp. 305-328.

Gamage, L.B., De Silva, C.W.

[Task scheduling and management using genetic algorithms with application in production process optimisation](#)

(2012) International Journal of Manufacturing Research, 7 (3), pp. 273-289.

Jiao, S.M., De Silva, C.W.

[An approach to parameter identification using linear graphs and improved particle swarm optimization](#)

(2012) International Journal of Modelling and Simulation, 32 (3), pp. 185-191.

Khoshnoud, F., De Silva, C.W.

[Recent advances in MEMS sensor technology-thermo-fluid and electro-magnetic devices](#)

(2012) IEEE Instrumentation and Measurement Magazine, 15 (3), art. no. 6204868, pp. 16-20.

Khoshnoud, F., De Silva, C.W.

[Recent advances in MEMS sensor technology-mechanical applications](#)

(2012) IEEE Instrumentation and Measurement Magazine, 15 (2), art. no. 6174574, pp. 14-24.

Wu, K., De Silva, C.W., Dunford, W.G.

[Stability analysis of isolated bidirectional dual active full-bridge DC-DC converter with triple phase-shift control](#)

(2012) IEEE Transactions on Power Electronics, 27 (4), art. no. 6012531, pp. 2007-2017.

Khoshnoud, F., De Silva, C.W.

[Recent advances in MEMS sensor technology-biomedical applications](#)

(2012) IEEE Instrumentation and Measurement Magazine, 15 (1), art. no. 6145254, pp. 8-14.

Khan, M.T., De Silva, C.W.

[Autonomous and robust multi-robot cooperation using an artificial immune system](#)

(2012) International Journal of Robotics and Automation, 27 (1), pp. 60-75.

Wang, Y., Lang, H., Lin, H., De Silva, C.W.

[Vision-based grasping using mobile robots and nonlinear model predictive control](#)

(2012) Control and Intelligent Systems, 40 (1), pp. 3-10.

Wang, Y., Siriwardana, P.G.D., De Silva, C.W.

[Multi-robot cooperative transportation of objects using machine learning](#)

(2011) International Journal of Robotics and Automation, 26 (4), pp. 369-375.

De Silva, C.W.

[Control and applications foreword](#)

(2011) Proceedings of the 13th IASTED International Conference on Control and Applications, CA 2011, .

Khoshnoud, F., Owhadi, H., De Silva, C.W.

[Stochastic simulation of energy extraction with an optically controlled nano-electromechanical engine](#)

(2011) International Journal of Modelling and Simulation, 31 (2), pp. 134-142.

De Silva, C.W.

[Zadeh-MacFarlane-Jamshidi theorems on decoupling of a fuzzy rule base](#)

(2011) Scientia Iranica, 18 (3 D), pp. 611-616.

Gamage, L.B., De Silva, C.W., Campos, R.

[Design evolution of mechatronic systems through modeling, on-line monitoring, and evolutionary optimization](#)

(2012) Mechatronics, 22 (1), pp. 83-94.

Khoshnoud, F., De Silva, C.W.

[Modal analysis of systems using a neuro-fuzzy approach](#)

(2010) ASME International Mechanical Engineering Congress and Exposition, Proceedings (IMECE), 8 (PARTS A AND B), pp. 1085-1097.

Khoshnoud, F., Owhadi, H., De Silva, C.W.

[Stochastic simulation of a casimir oscillator](#)

(2010) ASME International Mechanical Engineering Congress and Exposition, Proceedings (IMECE), 10, pp. 635-644.

Siriwardana, P.G.D., De Silva, C.

[Multi-robot cooperative transportation of objects using modified q-learning](#)

(2010) ASME International Mechanical Engineering Congress and Exposition, Proceedings (IMECE), 8 (PARTS A AND B), pp. 745-753.

Khan, M.T., Imanuel, T., Gabo, Y., Desilva, C.W.

[Robust multi-robot cooperation using an idiotypic model of artificial immune systems](#)

(2010) ASME International Mechanical Engineering Congress and Exposition, Proceedings (IMECE), 8 (PARTS A AND B), pp. 579-586.

Khoshnoud, F., De Silva, C.W., Owhadi, H.

[Analysis and design of a nano-electromechanical vibration sensor](#)

(2010) ASME International Mechanical Engineering Congress and Exposition, Proceedings (IMECE), 10, pp. 521-529.

Gamage, L.B., De Silva, C.W.

[A system framework with online monitoring and evaluation for design evolution of engineering systems](#)

(2010) Journal of Computing and Information Science in Engineering, 10 (3), art. no. 034501, .

Tahir Khan, M., Imanuel, T., De Silva, C.W.

[Autonomous market-based multi-robot cooperation](#)

(2010) 2010 International Conference on Intelligent and Advanced Systems, ICIAS 2010, art. no. 5716236, .

Lang, H., Wang, Y., De Silva, C.W.

[Visual servoing with LQR control for mobile robots](#)

(2010) 2010 8th IEEE International Conference on Control and Automation, ICCA 2010, art. no. 5524062, pp. 317-321.

Lang, H., Wang, Y., De Silva, C.W.

[Vision based object identification and tracking for mobile robot visual servo control](#)

(2010) 2010 8th IEEE International Conference on Control and Automation, ICCA 2010, art. no. 5524180, pp. 92-96.

Wang, Y., Lang, H., De Silva, C.W.

[An autonomous mobile grasping system using visual servoing and nonlinear model predictive control](#)

(2010) 2010 8th IEEE International Conference on Control and Automation, ICCA 2010, art. no. 5524177, pp. 86-91.

Ganji, M., Behbahani, S., De Silva, C.W.

[Integrated modeling of an electro-hydraulic servo manipulator using linear graphs](#)

(2010) 2010 8th IEEE International Conference on Control and Automation, ICCA 2010, art. no. 5524013, pp. 303-308.

De Silva, C.W., Wong, K.

[Online fault identification and fault-tolerant control of a multi-module manipulator](#)

(2010) International Journal of Robotics and Automation, 25 (3), pp. 217-228.

Wang, Y., Lang, H., De Silva, C.W.

[A hybrid visual servo controller for robust grasping by wheeled mobile robots](#)

(2010) IEEE/ASME Transactions on Mechatronics, 15 (5), art. no. 5339206, pp. 757-769.

Kim, D.W., De Silva, C.W., Park, G.-T.

[Evolutionary design of Sugeno-type fuzzy systems for modelling humanoid robots](#)

(2010) International Journal of Systems Science, 41 (7), pp. 875-888.

De Silva, C.W.

[Use of linear graphs and Thevenin/Norton equivalent circuits in the modeling and analysis of electro-mechanical systems](#)

(2010) International Journal of Mechanical Engineering Education, 38 (3), pp. 204-232.

Raman, S., De Silva, C.W.

[Classifier design for sensor-fault tolerant condition monitoring in an industrial machine](#)

(2010) Proceedings of the ASME Dynamic Systems and Control Conference 2009, DSCC2009, (PART A), pp. 637-643.

Khan, M.T., De Silva, C.

[Immune system-inspired dynamic multi-robot coordination](#)

(2010) Proceedings of the ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conference 2009, DETC2009, 3, pp. 37-43.

Siriwardana, P.G.D., Khan, M.T., De Silva, C.W.

[Object pose estimation for multi-robot cooperative object transportation](#)

(2010) Proceedings of the ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conference 2009, DETC2009, 3, pp. 449-457.

Wang, Y., De Silva, C.W.

[Sequential Q-learning with kalman filtering for multirobot cooperative transportation](#)

(2010) IEEE/ASME Transactions on Mechatronics, 15 (2), art. no. 5159474, pp. 261-268.

Khan, M.T., De Silva, C.

[Immune system-inspired dynamic multi-robot coordination](#)

(2009) Proceedings of the ASME Design Engineering Technical Conference, 3, pp. 37-43.

Siriwardana, P.G.D., Khan, M.T., De Silva, C.W.

[Object pose estimation for multi-robot cooperative object transportation](#)

(2009) Proceedings of the ASME Design Engineering Technical Conference, 3, pp. 449-457.