Prof. Maki K. HABIB

California Institute of Technology (CALTECH), USA

Prestes, E., Carbonera, J.L., Rama Fiorini, S., M. Jorge, V.A., Abel, M., Madhavan, R., Locoro, A., Goncalves, P., E. Barreto, M., Habib, M., Chibani, A., Gérard, S., Amirat, Y., Schlenoff, C.

Towards a core ontology for robotics and automation

(2013) Robotics and Autonomous Systems, 61 (11), pp. 1193-1204.

Haidegger, T., Barreto, M., Gonçalves, P., Habib, M.K., Ragavan, S.K.V., Li, H., Vaccarella, A., Perrone, R., Prestes, E.

Applied ontologies and standards for service robots

(2013) Robotics and Autonomous Systems, 61 (11), pp. 1215-1223.

Nagata, F., Otsuka, A., Watanabe, K., Sakakibara, K., Habib, M.K.

Mechatronics education systems through sensing and control design

(2013) IEEE International Symposium on Industrial Electronics, art. no. 6563676, .

Nagata, F., Otsuka, A., Kaoru, S., Watanabe, K., Habib, M.K.

Innovative experimental system supporting mechatronics education

(2013) Advances in Intelligent Systems and Computing, 208 AISC, pp. 753-761.

Nagata, F., Otsuka, A., Watanabe, K., Habib, M.K.

Multiple mobile robots system with network-based subsumption architecture

(2013) International Journal of Mechatronics and Manufacturing Systems, 6 (1), pp. 57-71.

Habib, M.K.

Editorial

(2013) International Journal of Mechatronics and Manufacturing Systems, 6 (1), pp. 1-2.

Kato, T., Watanabe, K., Maeyama, S., Habib, M.K.

A forming algorithm and its position estimation for triangle-based robot formation

(2013) International Journal of Mechatronics and Manufacturing Systems, 6 (1), pp. 38-56.

Nagata, F., Yoshitake, S., Otsuka, A., Watanabe, K., Habib, M.K.

Development of CAM system based on industrial robotic servo controller without using robot language

(2013) Robotics and Computer-Integrated Manufacturing, 29 (2), pp. 454-462.

Nagata, F., Kitahara, N., Otsuka, A., Sakakibara, K., Watanabe, K., Habib, M.K.

A proposal of experimental education system of mechatronics

(2013) Artificial Life and Robotics, 17 (3-4), pp. 378-382.

Paull, L., Severac, G., Raffo, G.V., Angel, J.M., Boley, H., Durst, P.J., Gray, W., Habib, M., Nguyen, B., Ragavan, S.V., Saeedi G., S., Sanz, R., Seto, M., Stefanovski, A., Trentini, M., Li, H.

Towards an ontology for autonomous robots

(2012) IEEE International Conference on Intelligent Robots and Systems, art. no. 6386119, pp. 1359-1364.

Haidegger, T., Barreto, M.E., Gonçalves, P.J.S., Habib, M., Ragavan, V., Schlenoff, C., Vaccarella, A., Prestes, E.

Nesting the context for pervasive robotics

(2012) UbiComp'12 - Proceedings of the 2012 ACM Conference on Ubiquitous Computing, pp. 826-834.

Habib, M.K., Watanabe, K., Nagata, F.

Bioinspiration and emerging actuator technologies

(2012) Artificial Life and Robotics, 17 (2), pp. 191-196.

Nagata, F., Yoshitake, S., Otsuka, A., Habib, M.K., Watanabe, K.

CAM system without using robot language for an industrial robot RV1A

(2012) IEEE International Symposium on Industrial Electronics, art. no. 6237318, pp. 1529-1534.

Nagata, F., Mizobuchi, T., Watanabe, K., Habib, M.K., Hase, T., Haga, Z., Omoto, M.

Automatic tool truing for an led lens cavity lapping system

(2011) International Journal of Robotics and Automation, 26 (4), pp. 419-431.

Nagata, F., Yoshitake, S., Otsuka, A., Watanabe, K., Habib, M.K.

Automatic control of an orthogonal-type robot with a force sensor and a small force input device

(2011) IECON Proceedings (Industrial Electronics Conference), art. no. 6119835, pp. 3270-3275.

Habib, M.K., Baudoin, Y., Nagata, F.

Robotics for rescue and risky intervention

(2011) IECON Proceedings (Industrial Electronics Conference), art. no. 6119841, pp. 3305-3310.

Habib, M.K.

Multi robotic system and the development of cooperative navigation behaviors for humanitarian demining

(2011) Proceedings of the 16th International Symposium on Artificial Life and Robotics, AROB 16th'11, pp. 553-556.

Habib, M.K.

Collaborative and distributed intelligent environment merging virtual and physical realities

(2011) IEEE International Conference on Digital Ecosystems and Technologies, art. no. 5936592, pp. 340-344.

Habib, M.K.

Humanitarian demining mine detection and sensors

(2011) Proceedings - ISIE 2011: 2011 IEEE International Symposium on Industrial Electronics, art. no. 5984509, pp. 2237-2242.

Habib, M.K.

Biomimetics: Innovations and robotics

(2011) International Journal of Mechatronics and Manufacturing Systems, 4 (2), pp. 113-134.

Nagata, F., Mizobuchi, T., Habib, M.K., Watanabe, K., Hase, T., Haga, Z.

Skillful stick-slip motion control of a cartesian-type robot

(2010) IEEE International Symposium on Industrial Electronics, art. no. 5637665, pp. 3577-3582.

Baudoin, Y., Habib, M.K., Doroftei, I.

Introduction: Mobile robotics systems for humanitarian de-mining and risky interventions

(2010) Using Robots in Hazardous Environments: Landmine Detection, De-Mining and Other Applications, pp. 3-31.

Baudoin, Y., Habib, M.K.

Using robots in hazardous environments: Landmine detection, de-mining and other applications

(2010) Using Robots in Hazardous Environments: Landmine Detection, De-Mining and Other Applications, 704 p.

Habib, M.K., Baudoin, Y.

Mechanical mine clearance: Development, applicability and difficulties

(2010) Using Robots in Hazardous Environments: Landmine Detection, De-Mining and Other Applications, pp. 299-326.

Nagata, F., Mizobuchi, T., Hase, T., Haga, Z., Watanabe, K., Habib, M.K.

Impedance model force control using a neural network-based effective stiffness estimator

(2010) Proceedings of the 15th International Symposium on Artificial Life and Robotics, AROB 15th'10, pp. 697-700.

Nagata, F., Mizobuchi, T., Tani, S., Hase, T., Haga, Z., Watanabe, K., Habib, M.K.

Stick-slip motion control for an orthogonal-type robot

(2010) Proceedings of the 15th International Symposium on Artificial Life and Robotics, AROB 15th'10, pp. 930-933.

Habib, M.K.

Behavior based autonomous navigation system for mobile robots

(2010) Proceedings of the 15th International Symposium on Artificial Life and Robotics, AROB 15th'10, pp. 689-692.

Nagata, F., Mizobuchi, T., Hase, T., Haga, Z., Watanabe, K., Habib, M.K.

CAD/CAM-based force controller using a neural network-based effective stiffness estimator

(2010) Artificial Life and Robotics, 15 (1), pp. 101-105.

Nagata, F., Mizobuchi, T., Tani, S., Hase, T., Haga, Z., Watanabe, K., Habib, M.K.

Stick-slip motion control based on cutter location data for an orthogonal-type robot

(2010) Artificial Life and Robotics, 15 (1), pp. 106-110.

Nagata, F., Mizobuchi, T., Tani, S., Hase, T., Haga, Z., Watanabe, K., Habib, M.K., Kiguchi, K.

Desktop orthogonal-type robot with abilities of compliant motion and stick-slip motion for lapping of LED lens molds

(2010) Proceedings - IEEE International Conference on Robotics and Automation, art. no. 5509747, pp. 2095-2100.

Nagata, F., Mizobuchi, T., Tanabe, T., Matsumura, G., Watanabe, K., Habib, M.K., Hase, T., Haga, Z.

Position-based impedance control using inner servo system and its application to a desktop NC machine tool

(2010) International Journal of Mechatronics and Manufacturing Systems, 3 (3-4), pp. 168-186.

Buddhika, A.G., Jayasekara, P., Watanabe, K., Habib, M.K., Izumi, K.

Visual evaluation and fuzzy voice commands for controlling a robot manipulator

(2010) International Journal of Mechatronics and Manufacturing Systems, 3 (3-4), pp. 244-260.

Habib, M.K., Baudoin, Y.

Robot-assisted risky intervention, search, rescue and environmental surveillance

(2010) International Journal of Advanced Robotic Systems, 7 (1), pp. 1-8.

Habib, M.K., Baudoin, Y.

Robotics for risky interventions and environmental surveillance

(2010) International Journal of Advanced Robotic Systems, 7 (1), .

Habib, M.K., Watanabe, K., Izumi, K.

Biomimetic intelligent creatures and artificial muscles

(2009) Proceedings of the 14th International Symposium on Artificial Life and Robotics, AROB 14th'09, pp. 724-727.

Jayasekara, A.G.B.P., Watanabe, K., Izumi, K., Habib, M.K.

Posture control of a robot manipulator by evaluating fuzzy linguistic information based on user feedback

(2009) IEEE International Symposium on Industrial Electronics, art. no. 5213786, pp. 1440-1445.

Habib, M.K.

Real time monitoring and avoidance using FG based 3D vision system

(2009) IEEE International Symposium on Industrial Electronics, art. no. 5222538, pp. xix-xxii.

Nagata, F., Mizobuchi, T., Tani, S., Hase, T., Haga, Z., Watanabe, K., Habib, M.K.

Impedance model force control using neural networks for a desktop NC machine tool

(2009) IEEE International Symposium on Industrial Electronics, art. no. 5219916, pp. 1428-1433.

Habib, M.K.

Decompose the operational space of FG vision system into parallel virtual planes to support autonomous navigation in dynamic environment

(2009) Proceedings of IEEE International Symposium on Computational Intelligence in Robotics and Automation, CIRA, art. no. 5423204, pp. 210-215.

Habib, M.K., Watanabe, K., Izumi, K.

Biped locomotion using CPG with sensory interaction

(2009) IEEE International Symposium on Industrial Electronics, art. no. 5219063, pp. 1452-1457.

Izumi, K., Habib, M.K., Watanabe, K., Sato, R.

Behavior selection based navigation and obstacle avoidance approach using visual and ultrasonic sensory information for quadruped robots

(2008) International Journal of Advanced Robotic Systems, 5 (4), pp. 379-388.

Nagata, F., Tani, S., Mizobuchi, T., Hase, T., Haga, Z., Omoto, M., Watanabe, K., Habib, M.K.

Basic performance of a desktop NC machine tool with compliant motion capability

(2008) Proceedings of 2008 IEEE International Conference on Mechatronics and Automation, ICMA 2008, art. no. 4798730, pp. 83-88.

Liu, G.L., Habib, M.K., Watanabe, K., Izumi, K.
Central pattern generators based on Matsuoka oscillators for the locomotion of biped robots
(2008) Artificial Life and Robotics, 12 (1-2), pp. 264-269.

Banik, S.C., Watanabe, K., Habib, M.K., Izumi, K.
An emotion-based task sharing approach for a cooperative multiagent robotic system
(2008) Proceedings of 2008 IEEE International Conference on Mechatronics and Automation, ICMA
2008, art. no. 4798729, pp. 77-82.

Habib, M.K.
Human adaptive and friendly mechatronics (HAFM)
(2008) Proceedings of 2008 IEEE International Conference on Mechatronics and Automation, ICMA
2008, art. no. 4798726, pp. 61-65.

Habib, M.K.
Humanitarian demining: Difficulties, needs and the prospect of technology
(2008) Proceedings of 2008 IEEE International Conference on Mechatronics and Automation, ICMA
2008, art. no. 4798754, pp. 213-218.

Habib, M.K.
Development of robot and navigation techniques for humanitarian demining
(2008) IEEE International Conference on Industrial Informatics (INDIN), art. no. 4618135, pp. 418-423.

Habib, M.K.
Distributed teleoperation and collaborative environment for robotics E-learning and cooperation
(2008) IEEE International Conference on Industrial Informatics (INDIN), art. no. 4618315, pp. 1358-
1363.

Habib, M.K.
Real time tracking and monitoring of human behavior in an indoor environment
(2008) Lecture Notes in Electrical Engineering, 21 LNEE, pp. 249-268.

Banik, S.C., Watanabe, K., Habib, M.K., Izumi, K.
Affection based multi-robot team work
(2008) Lecture Notes in Electrical Engineering, 21 LNEE, pp. 355-375.

Habib, M.K., Guang, L.L., Watanabe, K., Izumi, K.
Bipedal locomotion control via CPGs with coupled nonlinear oscillators
(2007) Proceedings of the 2007 4th IEEE International Conference on Mechatronics, ICM 2007, art. no.
4280021, .

Habib, M.K., Watanabe, K., Izumi, K.
Biomimetics robots from bio-inspiration to implementation
(2007) IECON Proceedings (Industrial Electronics Conference), art. no. 4460382, pp. 143-148.

Liu, G.L., Habib, M.K., Watanabe, K., Izumi, K.
CPG based control for generating stable bipedal trajectories under external perturbation
(2007) Proceedings of the SICE Annual Conference, art. no. 4421133, pp. 1019-1022.

Liu, G.L., Habib, M.K., Watanabe, K., Izumi, K.
Central pattern generators based on Matsuoka oscillators for the locomotion of biped robots
(2007) Proceedings of the 12th International Symposium on Artificial Life and Robotis, AROB 12th'07, pp. 768-773.

Watanabe, K., Liu, G.L., Habib, M.K., Izumi, K.
Neural oscillators with a sigmoidal function for the CPG of biped robot walking
(2007) IECON Proceedings (Industrial Electronics Conference), art. no. 4460256, pp. 128-133.

Habib, M.K.
Acoustic-to-seismic waves coupling techniques for landmine detection
(2007) Sensor Letters, 5 (3-4), pp. 500-515.

Habib, M.K.
Real time mapping and dynamic navigation for mobile robots
(2007) International Journal of Advanced Robotic Systems, 4 (3), pp. 323-338.

Tan, C.P., Habib, M.K.
Robust sensor fault reconstruction applied in real-time to an inverted pendulum
(2007) Mechatronics, 17 (7), pp. 368-380.

Habib, M.K.
Controlled biological and biomimetic systems for landmine detection
(2007) Biosensors and Bioelectronics, 23 (1), pp. 1-18.

Tan, C.P., Habib, M.K.
The development of a fault-tolerant control approach and its implementation on a flexible arm robot
(2007) Advanced Robotics, 21 (8), pp. 887-904.

Habib, M.K.

[Humanitarian demining: Reality and the challenge of technology - The state of the arts](#)

(2007) International Journal of Advanced Robotic Systems, 4 (2), pp. 151-172.

Habib, M.K.

[Robotics and sensing for humanitarian demining](#)

(2007) International Journal of Advanced Robotic Systems, 4 (2), pp. iii-iv.

Habib, M.K.

[Mechatronics - A unifying interdisciplinary and intelligent engineering science paradigm](#)

(2007) IEEE Industrial Electronics Magazine, 1 (2), pp. 12-24.

Habib, M.K.

[Fiber-grating-based vision system for real-time tracking, monitoring, and obstacle detection](#)

(2007) IEEE Sensors Journal, 7 (1), pp. 105-121.

Habib, M.K.

[Telecooperation through shared & integrated collaborative and distributed intelligent environments supporting mixed realities](#)

(2006) 2006 SICE-ICASE International Joint Conference, art. no. 4108091, pp. 2639-2643.

Tan, C.P., Habib, M.K.

[Fault tolerance of a flexible manipulator](#)

(2006) 9th International Conference on Control, Automation, Robotics and Vision, 2006, ICARCV '06, art. no. 4150307, .

Habib, M.K.

[Intelligent sensor system for real time tracking and monitoring](#)

(2006) Proceedings of IEEE Sensors, art. no. 4178638, pp. 382-387.

Habib, M.K.

[Mechatronics engineering the evolution, the needs and the challenges](#)

(2006) IECON Proceedings (Industrial Electronics Conference), art. no. 4153746, pp. 4510-4515.

Tan, C.P., Habib, M.K.

[Tolerance towards sensor faults; An application to a flexible arm manipulator](#)

(2006) International Journal of Advanced Robotic Systems, 3 (4), pp. 343-350.

Habib, M.K., Inayat-Hussain, J.I.

Fuzzy control scheme for dual-acting magnetic bearing actuator system

(2004) 2004 IEEE Conference on Robotics, Automation and Mechatronics, pp. 1186-1191.

Tant, C.P., Habib, M.K.

Robust sensor fault reconstruction for an inverted pendulum using right eigenstructure assignment

(2004) Proceedings of the IEEE International Conference on Control Applications, 2, pp. 1236-1241.

Tan, C.P., Habib, M.K.

Implementation of a sensor fault reconstruction scheme on an inverted pendulum

(2004) 2004 5th Asian Control Conference, 3, pp. 1423-1428.

Tan, C.P., Habib, M.K.

A robust sensor fault tolerant control scheme implemented on a flexible joint

(2004) 2004 IEEE Conference on Robotics, Automation and Mechatronics, pp. 370-375.

Habib, M.K., Inayat-Hussain, J.I.

Fuzzy logic based control of rotor motion in active magnetic bearings

(2004) 2004 IEEE Conference on Cybernetics and Intelligent Systems, pp. 1218-1224.

Habib, M.K., Yuen, I.N.S.

Design, modelling, and simulation of a wall climbing robot

(2003) International Conference on Mechatronics, ICOM 2003, pp. 511-518.

Habib, M.K.

'URUK' autonomous hexapod walking robot

(2003) International Conference on Mechatronics, ICOM 2003, pp. 497-504.

Habib, M.K.

A new approach to generate fixed-polarity Reed-Muller expansions for completely and incompletely specified functions

(2002) International Journal of Electronics, 89 (11), pp. 845-876.

Habib, M.K.

Designing fuzzy logic controllers for DC servomotors supported by fuzzy logic control development environment

(2001) IECON Proceedings (Industrial Electronics Conference), 1, pp. 2093-2098.

Habib, M.K.

Mine detection and sensing technologies - New development potentials in the context of humanitarian demining

(2001) IECON Proceedings (Industrial Electronics Conference), 1, pp. 1612-1621.

Habib, M.K.

Team based telecooperative environment supporting distributed smart virtual spaces merged with reality for humanitarian demining

(2001) European Journal of Mechanical and Environmental Engineering, 46 (2), pp. 123-129.

Habib, M.K.

Collaborative teleoperation design requirements and development issues

(2000) IECON Proceedings (Industrial Electronics Conference), 1, pp. 19-27.

Nicoud, J.D., Habib, M.K.

Pemex-B autonomous demining robot: Perception and navigation strategies

(1995) IEEE International Conference on Intelligent Robots and Systems, 1, pp. 419-424.

Habib, M.K., Yuta, S.

Map representation of a large in-door environment with path planning and navigation abilities for an autonomous mobile robot with its implementation on a real robot

(1993) Automation in Construction, 2 (2), pp. 155-179.

Habib, M.K.

Efficient and fast algorithm to generate minimal Reed-Muller Exclusive-OR expansions with mixed polarity for completely and incompletely specified functions and its computer implementation

(1993) Computers and Electrical Engineering, 19 (3), pp. 193-211.

Asama, Hajime, Ishida, Yoshiki, Ozaki, Koichi, Habib, Maki K., Matsumoto, Akihiro, Kaetsu, Hayato, Endo, Isao

Communication system between multiple robotic agents

(1992) pp. 647-654.

Habib, Maki, Asama, Hajime

Efficient method to generate collision free paths for autonomous mobile robot based on new free space structuring approach

(1991) 2, pp. 563-567.

Suzuki, S., Habib, M.K., Iijima, J., Yuta, S.

How to describe the mobile robot's sensor-based behavior?

(1991) Robotics and Autonomous Systems, 7 (2-3), pp. 227-237.