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Mechanical, Energy & Industrial Engineering
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Qualifications

Robotics, PhD Electronics and Communications Engineering, De La Salle University-Manila
May 12 2008 → Dec 9 2009
Award Date: Dec 9 2009

Robotics, Master of Science, Colorado State University
Aug 23 2001 → Sep 8 2006
Award Date: Sep 8 2006

Robotics, Master of Engineering (Research-Based), National University of Singapore
Jan 17 1997 → Sep 8 1999
Award Date: Aug 23 2001

B.S. Mechanical Engineering, University of the Philippines
Jun 17 1988 → Oct 14 1993
Award Date: Oct 14 1993

May 14 1995 → ... (4th Highest Place) Registered Mechanical Engineer, Professional Regulation Commission, Philippines, RME

Employment

Professor

Mechanical, Energy & Industrial Engineering
Botswana International University of Science & Technology
May 12 2016 → present

Professor

Faculty of Engineering & Technology
Botswana International University of Science & Technology
May 12 2016 → present

Research outputs

YOLOv3-Based Human Activity Recognition as Viewed from a Moving High-Altitude Aerial Camera

Mmerekhi, W., Jamisola, R. S., Mpoeleng, D. & Petso, T., Feb 4 2021, *2021 International Conference on Automation, Robotics and Applications, ICARA 2021*. Institute of Electrical and Electronics Engineers Inc., p. 241-246 6 p. 9376435. (2021 International Conference on Automation, Robotics and Applications, ICARA 2021).

A review on drones controlled in real-time

Kangunde, V., Jamisola, R. S. & Theophilus, E. K., Jan 5 2021, In: *International Journal of Dynamics and Control*. 15 p.

A review on control and maneuvering of cooperative fixed-wing drones

Elijah, T., Jamisola, R. S., Tjiparuro, Z. & Namoshe, M., 2020, (Accepted/In press) In: *International Journal of Dynamics and Control*.

Design and Analysis of Hip Joint DOFs for Lower Limb Robotic Exoskeleton

Gwebu, Z., Moruti, K. & Jamisola, R. S., Nov 2019, *2019 IEEE 11th International Conference on Humanoid, Nanotechnology, Information Technology, Communication and Control, Environment, and Management, HNICEM 2019*. Institute of Electrical and Electronics Engineers Inc., 6 p. 9073479. (2019 IEEE 11th International Conference on Humanoid, Nanotechnology, Information Technology, Communication and Control, Environment, and Management, HNICEM 2019).

EEG-based Control of a 3D Game Using 14-channel Emotiv EPOC+

Malete, T. N., Moruti, K., Thapelo, T. S. & Jamisola, R. S., Nov 2019, *Proceedings of the IEEE 2019 9th International Conference on Cybernetics and Intelligent Systems and Robotics, Automation and Mechatronics, CIS and RAM 2019*. Institute of Electrical and Electronics Engineers Inc., p. 463-468 6 p. 9095807. (Proceedings of the IEEE 2019 9th International Conference on Cybernetics and Intelligent Systems and Robotics, Automation and Mechatronics, CIS and RAM 2019).

Investigating Modular Relative Jacobian Control for Bipedal Robot

Jamisola, R. S., Mbedzi, O., Makati, T. & Roberts, R. G., Nov 2019, *Proceedings of the IEEE 2019 9th International Conference on Cybernetics and Intelligent Systems and Robotics, Automation and Mechatronics, CIS and RAM 2019*. Institute of Electrical and Electronics Engineers Inc., p. 428-432 5 p. 9095768. (Proceedings of the IEEE 2019 9th International Conference on Cybernetics and Intelligent Systems and Robotics, Automation and Mechatronics, CIS and RAM 2019).

An automated solar-powered aquaponics system towards agricultural sustainability in the Sultanate of Oman

Nagayo, A. M., Mendoza, C., Vega, E., Al Izki, R. K. S. & Jamisola, R. S., Sep 14 2017, *2017 IEEE International Conference on Smart Grid and Smart Cities, ICSGSC 2017*. Institute of Electrical and Electronics Engineers Inc., p. 42-49 8 p. (2017 IEEE International Conference on Smart Grid and Smart Cities, ICSGSC 2017).

Cloud-based Wireless Monitoring System and Control of a Smart Solar-Powered Aquaponics Greenhouse to Promote Sustainable Agriculture and Fishery in an Arid Region

Nagayo, A. M. & Jamisola, R., Jun 12 2017.

A review on quality factor enhanced on-chip microwave planar resonators

Kobe, O. B., Chuma, J., Jamisola, R. & Chose, M., 2017, In: *Engineering Science and Technology, an International Journal*. 20, 2, p. 460-466 7 p.

A Survey in the Different Designs and Control Systems of Powered Exoskeleton for Lower Extremities

Baldovino, R. G. & Jamisola, R., 2017, In: *Journal of Mechanical Engineering and Biomechanics*. 1, 4, p. 109-115 13 p.

A Survey on Management of Upstream Land Use and its Impact on Downstream Water Quality Parameters

Patella, W., Jamisola, R., Letswenyo, M. W. & Nagayo, A. M., 2017, In: *Journal of Computational Innovations and Engineering Applications*. 2, 1, p. 1-11 11 p.

Bio-inspired holistic control through modular relative Jacobian for combined four-arm robots

Jamisola R.S., J. & Mastalli, C., 2017, *2017 18th International Conference on Advanced Robotics, ICAR 2017*. Institute of Electrical and Electronics Engineers Inc., p. 346-352 7 p.

BIUST Research & Innovation Symposium 2017: RDAIS 2017

Jamisola, R. (ed.), 2017

Modeling high-Q square spiral with variable segment width and spacing

Kobe, O. B., Chuma, J. M., Jamisola, R. S. & Chose, M., Dec 5 2016, *2016 IEEE Radio and Antenna Days of the Indian Ocean, RADIO 2016*. Institute of Electrical and Electronics Engineers Inc., 7772019

Task-Space Modular Dynamics for Dual-Arms Expressed through a Relative Jacobian

Jamisola, R. S., Kormushev, P. S., Roberts, R. G. & Caldwell, D. G., Aug 1 2016, In: *Journal of Intelligent and Robotic Systems: Theory and Applications*. 83, 2, p. 205-218 14 p.

Bio-inspired holistic control for a combined four-Arm robot through relative Jacobian of opposite and adjacent dual-Arm pairs

Jamisola, R. S., Jul 26 2016, *Proceedings of the IEEE RAS and EMBS International Conference on Biomedical Robotics and Biomechanics*. IEEE Computer Society, p. 132 1 p. 7523610. (Proceedings of the IEEE RAS and EMBS International Conference on Biomedical Robotics and Biomechanics; vol. 2016-July).

Modular relative jacobian for combined 3-arm parallel manipulators

Jamisola, R. S., Mastalli, C. & Ibikunle, F., Jan 1 2016, In: *International Journal of Mechanical Engineering and Robotics Research*. 5, 2, p. 90-95 6 p.

Conceptualizing a Questionnaire-Based Machine Learning Tool that Determines State of Mind and Emotion

Jamisola, R., 2016, In: *Lovotics*. 4, 1

Investigating task prioritization and holistic coordination using relative Jacobian for combined 3-arm cooperating parallel manipulators

Jamisola, R. S. & Ibikunle, F. A., 2016, *Journal of Advanced Computational Intelligence and Intelligent Informatics*. Fuji Technology Press, p. 117-123 7 p. 7393169. (Journal of Advanced Computational Intelligence and Intelligent Informatics; vol. 20).

On Modelling Wisdom, Intuition, and Reason

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Modular relative Jacobian for dual-arms and the wrench transformation matrix

Jamisola, R. S., Kormushev, P., Caldwell, D. G. & Ibikunle, F., Sep 23 2015, *Proceedings of the 2015 7th IEEE International Conference on Cybernetics and Intelligent Systems, CIS 2015 and Robotics, Automation and Mechatronics, RAM 2015*. Institute of Electrical and Electronics Engineers Inc., p. 181-186 6 p. 7274617

A more compact expression of relative Jacobian based on individual manipulator Jacobians

Jamisola, R. S. & Roberts, R. G., Jan 1 2015, In: *Robotics and Autonomous Systems*. 63, P1, p. 158-164 7 p.

Learning reactive robot behavior for autonomous valve turning

Ahmadzadeh, S. R., Kormushev, P., Jamisola, R. S. & Caldwell, D. G., Jan 1 2015, *2014 IEEE-RAS International Conference on Humanoid Robots, Humanoids 2014*. IEEE Computer Society, Vol. 2015-February. p. 366-373 8 p. 7041386

A Survey On Management of Upstream Land Use as a Direct Input to Energy Requirements in Water Purification Processes

Patella, W., Jamisola, R. & Letswenyo, M. W., 2015.

Energy Requirements in Cryptographic Mechanisms for Secure Wireless Sensor Networks: An Overview

Pule, M., Jamisola, R. & Ibikunle, F., 2015.

Haptic exploration of unknown surfaces with discontinuities

Jamisola, R. S., Kormushev, P., Bicchi, A. & Caldwell, D. G., Oct 31 2014, *IROS 2014 Conference Digest - IEEE/RSJ International Conference on Intelligent Robots and Systems*. Institute of Electrical and Electronics Engineers Inc., p. 1255-1260 6 p. 6942718

Relative impedance control for dual-arm robots performing asymmetric bimanual tasks

Lee, J., Chang, P. H. & Jamisola, R. S., Jan 1 2014, In: *IEEE Transactions on Industrial Electronics*. 61, 7, p. 3786-3796 11 p., 6523093.

Of Love and Affection and the Gaze Sensor

Jamisola, R., 2014, In: Lovotics. 1, 1

Relative task prioritization for dual-arm with multiple, conflicting tasks: Derivation and experiments

Lee, J., Chang, P. H. & Jamisola, R. S., Nov 14 2013, *2013 IEEE International Conference on Robotics and Automation, ICRA 2013*. p. 1928-1933 6 p. 6630833

Guaranteeing task prioritization for redundant robots given maximum number of tasks and singularities

Jamisola, R. S., Chang, P. H. & Lee, J., Dec 1 2012, *IEEE TENCON 2012: Sustainable Development Through Humanitarian Technology*. 6412276

A Novel Dynamics Identification Method for Rigid-Body Manipulators

Jamisola, R. & Dadios, E. P., 2011.

A Study on the State of Powered-Exoskeleton Design for Lower Extremities

Baldovino, R. G. & Jamisola, R., 2011. 7 p.

A Survey on Current Developments in Tactile Sensing Technology for Robotic Surgery and other Biomedical Applications

Nagayo, A. M. & Jamisola, R., 2011.

Experimental identification of manipulator dynamics through the minimization of its natural oscillations

Jamisola, R. S. & Dadios, E. P., Jan 1 2010, In: *Journal of Advanced Computational Intelligence and Intelligent Informatics*. 14, 1, p. 39-45 7 p.

Optimization of Failure-Tolerant Workspaces for Redundant Manipulators

Jamisola, R., 2010, In: *Philippine Science Letters*. 3, 1, p. 66-75 10 p.

Dynamics Parameters Identification of Rigid-Body Manipulators through Natural Oscillations

Jamisola, R., Dadios, E. P. & Ang, M. H., 2009, In: *Philippine Computing Journal*. 4, 2, p. 10-18 9 p.

Full Dynamics Identification and Control of PUMA 560 and Mitsubishi PA-10 Robots

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Identifying Mass, Center of Mass, and Moment of Inertia through Natural Oscillations for Full-Dynamics Control of Robot Manipulators

Jamisola, R., 2009, De la Salle University.

Identifying Moments of Inertia Parameters for Rigid-Body Manipulators

Jamisola, R. & Dadios, E. P., 2009.

Using Metaheuristic Computations to Find the Minimum-Norm-Residual Solution to Linear Systems of Equations

Jamisola, R., Dadios, E. P. & Ang, M. H., 2009, In: *Philippine Computing Journal*. 4, 2, p. 1-9 9 p.

A Comparison between Probabilistic Artificial Neural Network and Simulated Annealing in Finding the Minimum-Norm Residual Solution to Linear Systems of Equations

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A Probabilistic Computation of Artificial Neural Network and Genetic Algorithm in Finding the Minimum-Norm-Residual Solution to Linear Systems of Equations

Jamisola, R. & Dadios, E. P., 2008.

Identifying the failure-tolerant workspace boundaries of a kinematically redundant manipulator

Roberts, R. G., Jamisola, R. S. & Maciejewski, A. A., Nov 27 2007, *2007 IEEE International Conference on Robotics and Automation, ICRA'07*. p. 4517-4523 7 p. 4209793

Failure-tolerant path planning for kinematically redundant manipulators anticipating locked-joint failures

Jamisola, R. S., Maciejewski, A. A. & Roberts, R. G., Aug 1 2006, In: *IEEE Transactions on Robotics*. 22, 4, p. 603-612 10 p.

Failure-Tolerant Path Planning for Kinematically Redundant Manipulators

Jamisola, R., 2006

Compliant motion using a mobile manipulator: An operational space formulation approach to aircraft canopy polishing

Jamisola, R. S., Oetomo, D. N., Ang, M. H., Khatib, O., Lim, T. M. & Lim, S. Y., Jul 11 2005, In: *Advanced Robotics*. 19, 5, p. 613-634 22 p.

A computational feasibility study of failure-tolerant path planning

Jamisola, R. S., Maciejewski, A. A. & Roberts, R. G., Jul 19 2004, In: *Conference on Robotics and Remote Systems- Proceedings*. 10, p. 233-239 7 p.

Failure-tolerant path planning for the PA-10 robot operating amongst obstacles

Jamisola, R. S., Maciejewski, A. A. & Roberts, R. G., Jul 5 2004, In: *Proceedings - IEEE International Conference on Robotics and Automation*. 2004, 5, p. 4995-5000 6 p.

A Path Planning Strategy for Kinematically Redundant Manipulators Anticipating Joint Failures in the Presence of Obstacles

Jamisola, R. S., Maciejewski, A. A. & Roberts, R. G., Dec 26 2003, p. 142-148. 7 p.

The operational space formulation implementation to aircraft canopy polishing using a mobile manipulator

Jamisola, R., Ang, M. H., Oetomo, D., Khatib, O., Ming, T. & Lim, S. Y., Jan 1 2002, In: *Proceedings - IEEE International Conference on Robotics and Automation*. 1, p. 400-405 6 p.

Integration of Torque Controlled Arm with Velocity Controlled Base for Mobile Manipulation: An Application to Aircraft Canopy Polishing

Oetomo, D., Ang, M. H., Jamisola, R. & Khatib, O., 2002, *International Centre for Mechanical Sciences : Courses and Lectures*. Bianchi, G., Guinot, J.C. & Rzymkowski, C. (eds.). Vienna: Springer Nature, p. 189-199

Dynamics Identification and Control of an Industrial Robot

Jamisola, R., Ang, M. H., Lim, T. M., Khatib, O. & Lim, S. Y., 1999.

Awards**Projects**