

## Instructions for contributors

*Robotica* aims to be an outlet for publication of original papers of the highest quality in the field of Robotics and closely related areas. This includes: novel robotic mechanism and actuator design; robot kinematics, dynamics and control; computer vision; sensor fusion; teleoperation and haptic interfaces; robot motion planning; and artificial intelligence. In addition, papers that apply techniques from Robotics to other fields are also welcome. Examples include dynamics and control models applied to biological systems, the description of implementations of robots in factories, service and agricultural settings, and general mechatronic design. Works may be theoretical, computational or experimental, or some combination. Both short papers (rapid communications), and longer archival papers are welcome. Proposals for special issues on topics of current interest are welcome, and can be submitted via email to the editor.

Authors are urged to ensure that their papers are written clearly and attractively, in order that their work will be readily accessible to readers. Manuscripts must be written in English. *Robotica* employs a rigorous peer-review process whereby all submitted manuscripts are sent to recognized experts in their subjects for evaluation. The Editor's decision on the suitability of a manuscript for publication is final. Manuscripts, whether accepted or rejected, will not be returned to authors.

## Submission of manuscripts

Manuscripts for consideration by *Robotica* should be submitted electronically, using the Manuscript Central System, via <http://mc.manuscriptcentral.com/cup/robotica>. This system will allow authors to benefit from faster review and earlier, online publication. The system will accept PDF files; most other file types will be automatically converted directly into PDF. Source files are required for any paper accepted for publication. Authors who are unable to submit online should contact the Editorial Office ([gregc@jhu.edu](mailto:gregc@jhu.edu)) for assistance.

Submission of a paper is taken to imply that it has not been previously published and that it is not being considered for publication elsewhere. Upon acceptance of a paper, the author will be asked to transfer copyright to the publisher. Authors are responsible for obtaining written permission from the copyright owners to reprint any previously published material included in their article.

## Layout of manuscripts

Text should be double spaced throughout, on one side of the paper, allowing generous margins on all sides of the paper. Please avoid footnotes if possible. Papers should begin with an abstract of not more than 100 words and should end with a brief concluding section. The title and section headings should be concise and descriptive. All measurements should be given in SI units. On acceptance of a manuscript, authors are asked to send the electronic source file of the final version together with a PDF copy produced using the same file. The publisher reserves the right to typeset material by conventional means if an author's file proves unsatisfactory.

## Illustrations

Figures should be composed to occupy a single column (80mm) or two columns (166mm) after reduction. The preferred format for figure files is .eps or .tiff at resolution 1200 dpi for lines, 600 dpi for greyscale and 300 dpi for colour (which preferably should also be in CMYK – cyan magenta yellow black – format). However,

most standard image formats such as pct, ppm, png, psd, Word, ppt, CorelDraw, ChemDraw, AutoCAD can also be used, but not customized output of software not designed for publishing purposes such as Matlab, nor PDF. Figures to be printed in black and white must be submitted as black and white files.

Figures should be numbered consecutively, with Arabic numerals, have descriptive captions, and be mentioned in the text. A list of captions should be attached separately, and as far as possible, information relating to a figure should be placed in the caption rather than on the figure. Each figure should be clearly numbered. Photographs should be the same size as they will appear in the journal and should be selected to fit neatly into one column (80 mm) or two columns (166 mm). Photographs should be clearly identified and numbered as for line drawings.

## Tables

Tables should be presented on separate sheets. A descriptive title should be given to each table. If possible, very wide tables should be avoided. Tables should be numbered consecutively in Roman numerals. Exceptionally lengthy tables may be summarized for publication with a note that fuller details can be obtained from the authors.

## Equations

Mathematical equations should be typewritten, with subscripts and superscripts clearly indicated. All mathematical symbols will be set in italics unless otherwise indicated: symbols or letters to be set in Roman (upright) type should be marked clearly.

## References

In the text, references are indicated by superior Arabic numbers (without brackets), and should be confined to published work that is directly pertinent. References should be listed at the end of the paper in numerical order. Authors' initials should precede their names: cited article titles should be quoted in full, enclosed in quotation marks; and abbreviations of journal names should follow the style of Chemical Abstracts or Physical Abstracts, and be underlined for italics:

P.W. Anderson, "More is different" *Science* **177**, 393-399 (1972);  
C.V. Negoita, *Fuzzy Systems* (Abacus Press. Tunbridge Wells, UK, 1980).

Citations such as 'personal communication', 'unpublished work', etc., are not acceptable as numbered references but can be included in parenthesis in the text. Do not use summaries as references.

## Proof Reading

The corresponding author will receive PDF copies of page proofs for final proofreading. Only typographical or factual errors may be changed at proof stage. The publisher reserves the right to charge authors for correction of non-typographical errors. Authors are requested to return proofs within 48 hours by airmail. No page charge is made.

## Offprints

No paper offprints are provided, but the corresponding author will be sent the pdf of the published article. Print offprints may be purchased at extra cost at proof stage.

© CAMBRIDGE UNIVERSITY PRESS 2015

Cambridge University Press  
Journals Fulfillment Department, UPH, Shaftesbury Road, Cambridge CB2 8BS, UK.  
32 Avenue of the Americas, New York, NY 10013-2473, USA  
477 Williamstown Road, Port Melbourne, VIC 3207, Australia  
Ruiz de Alarcón 13, 28014, Madrid, Spain  
Dock House, The Waterfront, Cape Town 8001, South Africa

Printed in the UK by Bell & Bain Ltd, Glasgow

# ROBOTICA

Volume **33** Part **4** May **2015**

Humanoid robot upper body motion generation using B-spline-based functions, <b>M. Ruchanurucks</b>	<b>705</b>
Leakage-proof nozzle design for RepRap community 3D printer, <b>Adam Kłodowski, Harri Eskelinen and Scott Semken</b>	<b>721</b>
Analytical inverse kinematics for 5-DOF humanoid manipulator under arbitrarily specified unconstrained orientation of end-effector, <b>Masayuki Shimizu</b>	<b>747</b>
Distributed control strategy for flexible link manipulators, <b>Raouf Fareh, Mohamad Saad and Maarouf Saad</b>	<b>768</b>
Design of 3-legged XYZ compliant parallel manipulators with minimised parasitic rotations, <b>Guangbo Hao and Haiyang Li</b>	<b>787</b>
Worst-case analysis of moving obstacle avoidance systems for unmanned vehicles, <b>Sivaranjini Srikanthakumar and Wen-Hua Chen</b>	<b>807</b>
Modal space decoupled optimal design for a class of symmetric spatial parallel mechanisms with consideration of passive joint damping, <b>Tian Ti-Xian, Jiang Hong-Zhou, Tong Zhi-Zhong and He Jing-Feng</b>	<b>828</b>
Hand-eye servo and impedance control for manipulator arm to capture target satellite safely, <b>Gan Ma, Zhihong Jiang, Hui Li, Junyao Gao, Zhangguo Yu, Xuechao Chen, Yun-Hui Liu and Qiang Huang</b>	<b>848</b>
Offsetting obstacles of any shape for robot motion planning, <b>Md Nasir Uddin Laskar, Hoang Huu Viet, Seung Yoon Choi, Ishtiaq Ahmed, Sungyoung Lee and Tae Choong Chung</b>	<b>865</b>
Dynamic rolling analysis of triangular-bipyramid robot, <b>Yaobin Tian and Yan-An Yao</b>	<b>884</b>
Post-capture attitude control for a tethered space robot-target combination system, <b>Panfeng Huang, Dongke Wang, Zhongjie Meng and Zhengxiong Liu</b>	<b>898</b>
A simple and novel helical drive in-pipe robot, <b>Yonghua Chen, Qingyou Liu and Tao Ren</b>	<b>920</b>
Optimal regulation of a cable robot in presence of obstacle using optimal adaptive feedback linearization approach, <b>M. H. Korayem, H. Tourajizadeh, A. Zehfroosh and A. H. Korayem</b>	<b>933</b>
Analytical mechanics approaches in the dynamic modelling of Delta mechanism, <b>Renato Maia Matarazzo Orsino, Tarcisio Antonio Hess Coelho and Celso Pupo Pesce</b>	<b>953</b>
Cable motion capture and analysis based on optical tracking system, <b>Jingguo Ge and Hao Gu</b>	<b>974</b>
Teleoperation grasp assistance using infra-red sensor array, <b>Nutan Chen, Keng Peng Tee and Chee-Meng Chew</b>	<b>986</b>
Position and force tracking in nonlinear teleoperation systems under varying delays, <b>Farzad Hashemzadeh and Mahdi Tavakoli</b>	<b>1003</b>
Local path planning for mobile robots based on intermediate objectives, <b>Yingchong Ma, Gang Zheng, Wilfrid Perruquetti and Zhaopeng Qiu</b>	<b>1017</b>

Robotica now accepts submissions via Manuscript Central  
Go to <http://mc.manuscriptcentral.com/cup/robotica>

Cambridge Journals Online  
For further information about this journal  
please go to the journal website at:  
[journals.cambridge.org/rob](http://journals.cambridge.org/rob)



**CAMBRIDGE**  
UNIVERSITY PRESS