

## 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 ([robotica@cambridge.org](mailto:robotica@cambridge.org)) 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 & Assessment 2024

Cambridge University Press  
Journals Fulfillment Department, UPH, Shaftesbury Road, Cambridge CB2 8BS, UK.  
1 Liberty Plaza, Floor 20, New York, NY 10006, 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

# ROBOTICA

Volume **42** Part **7** July **2024**

Intelligence in robotics for computer, engineering, and applied sciences <b>Haisheng Xia, Zhijun Li, Guang Chen, Hong Qiao and Jian S Dai</b>	<b>2085</b>
Panoramic visual system for spherical mobile robots <b>Muhammad Affan Arif, Aibin Zhu, Han Mao and Yao Tu</b>	<b>2089</b>
Vision-based food handling system for high-resemblance random food items <b>Yadan Zeng, Yee Seng Teoh, Guoni Zhu, Elvin Toh and I-Ming Chen</b>	<b>2108</b>
Multi-objective optimization approach for coverage path planning of mobile robot <b>Monex Sharma and Hari Kumar Voruganti</b>	<b>2125</b>
Automatic extrinsic calibration for structured light camera and repetitive LiDARs <b>Yangtao Ge, Chen Yao, Zirui Wang, Bangzhen Huang, Haoran Kang, Wentao Zhang, Zhenzhong Jia and Jing Wu</b>	<b>2150</b>
A visual SLAM-based lightweight multi-modal semantic framework for an intelligent substation robot <b>Shaohu Li, Jason Gu, Zhijun Li, Shaofeng Li, Bixiang Guo, Shangbing Gao, Feng Zhao, Yuwei Yang, Guoxin Li and Lanfang Dong</b>	<b>2169</b>
An asymmetric S-curve trajectory planning based on an improved jerk profile <b>Choi Jun Han, Kwang Rim Song and Un-Ryong Rim</b>	<b>2184</b>
Dynamic simultaneous localization and mapping based on object tracking in occluded environment <b>Weili Ding, Ziqi Pei, Tao Yang and Taiyu Chen</b>	<b>2209</b>
Design and analysis of a negative pressure wall-climbing robot with an omnidirectional characteristic for cylindrical wall <b>Chunyang Yuan, Yong Chang, Yifeng Song, Song Lin and Fengren Jing</b>	<b>2226</b>
A Multi-UAV cooperative mission planning method based on SA-WOA algorithm for three-dimensional space atmospheric environment detection <b>Binggang Yu, Shurui Fan, Weijia Cui, Kewen Xia and Li Wang</b>	<b>2243</b>
Configuration design of movable heavy-duty reconfigurable posture adjustment platform with dual motion modes <b>Rui Wang, Xiaoyan Xiong, Jinzhu Zhang and Ruilin Yuan</b>	<b>2281</b>
Robotica: decoupled elastostatic stiffness modeling of hybrid robots <b>Baoyu Wang, Peixing Li, Chao Yang, Xudong Hu and Yanzheng Zhao</b>	<b>2309</b>
Six-dimensional constraints and force feedback for robot-assisted teleoperated fracture reduction <b>Jingtao Lei and Guangqing Song</b>	<b>2328</b>
Earlier smart prediction of diabetic retinopathy from fundus image under innovative ResNet optimization maneuver <b>S. S. Sunil and A. Shri Vindhya</b>	<b>2345</b>
CPR-SLAM: RGB-D SLAM in dynamic environment using sub-point cloud correlations <b>Xinyi Yu, Wancai Zheng and Linlin Ou</b>	<b>2367</b>
A local collision-free motion planning strategy for hyper-redundant manipulators based on dynamic safety envelopes <b>Renjie Ju, Dong Zhang, Yan Gai and Zhengcai Cao</b>	<b>2388</b>
A machine learning-based approach for automatic motion/constraint and mobility analysis of parallel robots <b>Xinming Huo, Zehong Song and Tao Sun</b>	<b>2403</b>
Electro-mechanical modelling and identification of the UR5 e-series robot <b>Enrico Clochiatti, Lorenzo Scalera, Paolo Boscarol and Alessandro Gasparetto</b>	<b>2430</b>
Three-dimensional path planning with enhanced gravitational search algorithm for unmanned aerial vehicle <b>Keming Jiao, Jie Chen, Bin Xin, Li Li, Yifan Zheng and Zhixin Zhao</b>	<b>2453</b>

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

Cambridge Core

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



CAMBRIDGE  
UNIVERSITY PRESS