

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 files 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) 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 **5** May **2024**

Insights into the deployment of a social robot-augmented telepresence robot in an elder care clinic – perspectives from patients and therapists: a pilot study Michael J. Sobrepera, Anh T. Nguyen, Emily S. Gavin and Michelle J. Johnson	1321
Collision-free path planning for cable-driven continuum robot based on improved artificial potential field Meng Ding, Xianjie Zheng, Liaoxue Liu, Jian Guo and Yu Guo	1350
Wireless vision-based digital media fixed-point DSP processor depending robots for natural calamities S. Mary Joans, N. Gomathi and P. Ponsudha	1368
An experimental evaluation of robot-stopping approaches for improving fluency in collaborative robotics Lorenzo Scalera, Federico Lozer, Andrea Giusti and Alessandro Gasparetto	1386
Heavy-duty hexapod robot sideline tipping judgment and recovery Lianzhao Zhang, Fusheng Zha, Wei Guo, Chen Chen, Lining Sun and Pengfei Wang	1403
A novel tactile sensor with multimodal vision and tactile units for multifunctional robot interaction Pengwen Xiong, Yuxuan Huang, Yifan Yin, Yu Zhang and Aiguo Song	1420
Force analysis of a soft-rigid hybrid pneumatic actuator and its application in a bipedal inchworm robot Zhujin Jiang and Ketao Zhang	1436
Research and experiment on active training of lower limb based on five-bar mechanism of man-machine integration system Jianghong Sun, Fuqing Hu, Keke Gao, Feng Gao, Chao Ma and Junjian Wang	1453
Adaptive fractional-order integral fast terminal sliding mode and fault-tolerant control of dual-arm robots Le Anh Tuan and Quang Phuc Ha	1476
An improved iterative approach with a comprehensive friction model for identifying dynamic parameters of collaborative robots Zeyu Li, Hongxing Wei, Chengguo Liu, Ye He, Gang Liu, Haochen Zhang and Weiming Li	1500
Structure design and kinematic performance of the deployable translational parallel tape-spring manipulator Hu Liu, Yawen Qin and Yi Yang	1523
Inverse dynamics analysis of a 6-RR-RP-RR parallel manipulator with offset universal joints Huze Huang, Hasiaoqier Han, Dawei Li, Zhenbang Xu and Qingwen Wu	1549
Adaptive backstepping controller based on a novel framework for dynamic solution of an ankle rehabilitation spherical parallel robot Ali Ahmadi N, Ali Kamali Egholi and Afshin Taghvaeipour	1568
A trocar puncture robot for assisting venipuncture blood collection Zhikang Yang, Shikun Wen, Qian Qi, Zhuohai Lv and Aihong Ji	1597
Micro-hexapod robot with an origami-like SU-8-coated rigid frame Kenjiro Sugimoto and Sumito Nagasawa	1614
Symbolic position analysis for three 6-DOF parallel mechanisms and new insight Zhongqiu Du, Ju Li, Qingmei Meng, Pengda Ye and Huiping Shen	1628
Performance evaluation and dimensional optimization design of planar 6R redundant actuation parallel mechanism Ming Han, Jiajin Che, Jinyue Liu and Dong Yang	1649
A modular computational framework for the dynamic analyses of cable-driven parallel robots with different types of actuation including the effects of inertia, elasticity and damping of cables Teja Krishna Mamidi and Sandipan Bandyopadhyay	1676

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



CAMBRIDGE
UNIVERSITY PRESS