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EDITORIAL

Historical review of 40 years of *Robotica* and its way ahead

Robotica enters its 40th anniversary, which marks its extraordinary historical trajectory with a thrilling and distinguished future. Over the course of 40 years, *Robotica* has dedicated itself to advancing the science and technology of robotics and automation while offering an international venue for high-quality academic exchange, addressing challenges, and presenting the innovation and progress in robotics.

Beginning as a quarterly publication in 1983, *Robotica* became a bimonthly and now a monthly international journal, publishing around 200 pieces a year. The Journal further utilizes a single-column format, which demonstrates greater clarity for intricate figures, equations, and tables. In 2014, we also modified the cover design to represent the distinct topic of each issue. These enhancements not only elevated the reading experience but also highlighted *Robotica*'s dedication to addressing the changing requirements of the research community.

Robotica is a worldwide, multidisciplinary scientific forum focused on robotics, with both theory and application that are invariably interconnected. Its scope has expanded to include a wide range of topics including kinematics, dynamics, telerobotics, robotic vision, artificial intelligence, control systems, computational mechanics, computer science-based applications, computer vision and pattern recognition, sensor technologies, rehabilitation robots, and bio-inspired robots. Not only does the Journal cover the economic and social issues, but it also helps the integration of robotics in both society and people's lives through theoretical and practical bases.

Analysis of citation trends has underscored *Robotica*'s influence over time. Examining citation data via quartile distribution reveals distinct patterns. In the first 3 years, scholarly articles typically exhibited modest citation frequencies, characterized by a limited distribution range, reflecting a relatively uniform level of reader engagement. In recent years, citation counts have increased steadily, with the quartile range being narrowed as the impact of foundational research has stabilized. This pattern highlights the necessity of recognizing and fostering innovative research to stimulate engagement and elevate the journal's prestige.

This Special Issue commemorating the 40th Anniversary of *Robotica* includes contributions from esteemed professionals in the field of robotics throughout institutions across North America, Europe, the Middle East, and Asia. The topics in the issue include a broad range of fields in robotics, encompassing both theoretical and practical dimensions. In the field of artificial intelligence and algorithms, the papers encompass subjects from machine learning to control frameworks and robotic collision functions. In kinematics and dynamics, the papers explore quaternion-based mapping, kinematic metrics, and multibody dynamics. For robot architectures, the papers delve into synthesis, variable stiffness, and reconfiguration. In actuation, the papers cover various approaches, including traction, underactuated systems, and mechanical actuation. Multidisciplinary approaches are showcased in studies ranging from resorbable materials to fiber-reinforced soft pneumatic actuators. A diverse array of robotic developments is further featured in the elderly-motion assistive robots, the steerable robot walkers, the lower gastrointestinal endoscopy robots, the underactuated bio-inspired robots, the soil-sampling robots, and the high-degrees-of-freedom multi-arm robotic systems. In addition to the aforementioned, this Special Issue includes several comprehensive review articles that provide valuable insights across the field of robotics. With all of these, this Special presents a rich library of knowledge, offering significant benefits to our readers.

To commemorate the 40th anniversary of *Robotica*, we are proud to establish the "Robotica Rose Best Paper Award," named in honor of Professor J. Rose, the founding Editor-in-Chief of the journal since its inception in 1983. The award is to be given annually for excellence in research and scholarship within Robotics. The first edition of the Award, the "2023 Robotica Rose Best Paper Award" is presented to Qaid Mohammed Marwan, Shing Chyi Chua and Lee Chung Kwek for their paper on *"Comprehensive Review on Reaching and Grasping of Objects in Robotics."*

Further, we would like to recognize the considerable efforts of our reviewers who diligently ensure the prompt and efficient assessment of all submitted manuscripts. Their contributions are essential for upholding the excellence of *Robotica*, and we express our sincere gratitude for their support. Through these events, *Robotica* reaffirms its commitment to promoting excellence and collaboration in robotics research, anticipating promising decades of innovation and success. The list of reviewers for 2024 is appended as a supplementary file to this Editorial.

Over the past 40 years, *Robotica* has demonstrated growth, resilience, and excellence. This achievement has only been possible due to the steadfast support of authors, reviewers, editors, and readers worldwide. As we embark on this new chapter, we look forward to continuing to serve as a platform for groundbreaking research and fostering innovation in robotics and automation. Join us in celebrating 40 years of exploration and achievement while looking forward to the next 40 years as we continue our collaborative endeavors.

Faithfully,

Supplementary material. To view supplementary material for this article, please visit https://doi.org/10.1017/S0263574725000207.

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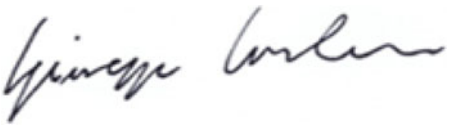

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