

# A New RAS Journal: *IEEE Robotics and Automation Practice*

By Torsten Kroeger<sup>1</sup>, Brian Gerkey<sup>2</sup>, Paul Goldberg<sup>3</sup>, Todd Murphey, and Frank Park

The field of robotics and automation is not only growing; its growth continues to accelerate. The same is true for the IEEE Robotics and Automation Society and our members' impact worldwide. Across all application domains, we are seeing increasingly more robots and applications leaving research labs as mature and beneficial products. Worldwide, we are seeing

- an increased number of research labs funded by industrial partners
- an increased investment volume in commercial research labs.

In light of this trend, it is all the more important to recognize that scientists, researchers, engineers, practitioners, and, very often, also doctoral students working on applied robotics and automation research projects do not have an adequate venue in which to publish their works and results. Our Society's new journal, *IEEE Robotics and Automation Practice (RAP)*, seeks to publish results whose value to practitioners is clear.

## FILLING A GAP AND CREATING A NEW VENUE

*IEEE Transactions on Robotics (TRO)*, *IEEE Transactions on Automation Science and Engineering (TASE)*, *IEEE Robotics and Automation Letters (RAL)*, and *IEEE Robotics & Automation Magazine (RAM)* are highly successful journals of our Society; they are mature periodicals. Any changes to their editorial policies sufficient to allow for the kind of practitioner articles we envision would be drastic, disruptive, and corrosive to their core identities.

*RAP* articles will generally be much shorter (around four pages) than their counterparts in current RAS periodicals (15–17 pages for *TRO*; ≥13 pages for *TASE*; 10–12 pages for *RAM*; and six to

eight pages for *RAL*). Practitioner articles will also require different review processes from those in operation in current RAS periodicals. For instance, academic novelty—assessing whether a particular idea has ever been present in any publication previously—is a crucial aspect of reviews for current RAS periodicals. This will be de-emphasized for practitioner articles. The focus instead will be on the successful application of an idea to industry. Conversely, while reproducibility is desirable for current RAS publications, it would be of paramount importance for practitioner articles. Additionally, practitioner articles might very well be explicitly evaluated for their expected practical impact on robotics technology. But this criterion is not currently considered in the review processes for today's RAS periodicals, which, as noted previously, focus on an article's scientific impact and novelty.

## PUBLISHING IN *RAP*: EXAMPLES

*RAP* will be a venue for the large and growing community of practitioners who use the Robotics Operating System (ROS). The ROS can be loosely viewed as “Linux for robotics,” and there is a growing community of users who contribute everything from drivers to state-of-the-art algorithms for robot sensing, planning, control, and so on. ROSCon is an annual conference devoted to ROS that first started in 2012; it now regularly attracts hundreds of contributors and participants to its in-person conference. A large portion

of the work presented at ROSCon would be ideal for publication in *RAP*, where authors could provide important technical details and other useful information about the code.



A LARGE PORTION OF THE WORK PRESENTED AT ROSCON WOULD BE IDEAL FOR PUBLICATION IN *RAP*, WHERE AUTHORS COULD PROVIDE IMPORTANT TECHNICAL DETAILS AND OTHER USEFUL INFORMATION ABOUT THE CODE.



Other authors who might contribute are the many research engineers and scientists working for governments or at national labs (e.g., places such as the National Institute of Standards and Technology in the United States, the National Institute of Advanced Industrial Science and Technology in Japan, the Korea Institute of Science and Technology in Korea, and Fraunhofer Institutes in Germany).

These practitioners have a strong incentive to publish articles for promotion and evaluation. Often Ph.D. students working in these labs have highly impactful results but no outlet in which to publish them because this work would often not meet the requirements for academic novelty and significance that characterize current RAS periodicals. Nevertheless, this work would be immediately deployable and of high value to the community of practitioners. Examples of such work include

- the design and empirical analysis of grippers with certain soft materials (e.g., regarding which are robust, which break down easily, and which are affordable)
- a comparative analysis of algorithms/code in specific real-world settings (e.g., simultaneous localization and mapping, motion planning, control, machine learning, and robot vision)

Digital Object Identifier 10.1109/MRA.2024.3354522  
Date of current version: 19 March 2024

■ system integration: for example, when building a mobile manipulator using both off-the-shelf and custom parts, what are the unexpected challenges (compatibility issues, heat dissipation)? What are the potential workarounds?

*RAP* will be a dedicated forum for publishing and sharing such works with the larger community of robotics practitioners and also with academic researchers who are in need of testbeds.

*RAP* submissions may include algorithms, code, methodologies, and designs that demonstrate either improvements over the state of the art or a new practi-

cal application. Empirical studies, in-depth case studies, and other experimental works that contribute to the body of knowledge in the practice of robotics and automation will also be considered. Finally, articles that report on trends and developments that impact industrial engineers or other practitioners are welcome. All application domains as described in the scope of the journals sponsored by RAS are acceptable.

#### FIRST ISSUE TO LAUNCH IN 2024

In 2023, the application and approval process for *RAP* was led by Todd Murphey (RAS vice president for publication activities), Paul Goldberg (RAS

staff), and Frank Park (RAS president). The proposal was approved by IEEE in late November 2023. As we write this article in January 2024, we are in the process of setting up the Senior Editorial Board, the Advisory Board, the article submission and review system, and a new section of the RAS website ([iee-ras.org](http://iee-ras.org)). Torsten Kroeger will be the first editor-in-chief, and Brian Gerkey will be the founding chair of the Advisory Board.

By the time this article is published, we expect that the journal will be launched and will have already received its first submissions or will be doing so in the near future.

---

## Deadline for RAS Local Chapter Initiative Grants

The IEEE Robotics and Automation Society (RAS) Member Activities Board (MAB) awards a limited number of


Chapter Initiative Grants to local RAS Chapters for professional development, educational outreach, and other programs. Grant proposals will be reviewed by the MAB at its meeting in late May 2024, and funds up to

US\$2,000 will be awarded on a competitive basis. The deadline for proposals is 15 April 2024. For submission details, please visit <https://www.ieee-ras.org/chapters/support-for-chapters>.

Digital Object Identifier 10.1109/MRA.2024.3354521  
Date of current version: 19 March 2024

---

## In Memoriam: Philippe Coiffet (1940–2023)

By Abderrahmane Kheddar , on behalf of the French Research Robotics Network

It is with deep sadness that we share the news of the passing of Prof. Philippe Coiffet on Friday, 20 October 2023, at the age of 83. Philippe was a remarkable person. As a scientist, he

was a visionary and an open-minded researcher; he dedicated his life to the field of robotics (in particular, telero-botics and virtual reality), and he leaves us a rich legacy. On a human level, he was incredibly friendly and kind and an outstanding mentor to his students. Philippe received a doctorate in nucle-

ar physics from Orsay University. He spent his entire scientific career at the Centre national de la recherche scientifique. In 1972, he set up the first public robotics research team at the University of Montpellier. Since then, he took numerous secondments. Philippe developed the first force feedback data

Digital Object Identifier 10.1109/MRA.2024.3354093  
Date of current version: 19 March 2024