Service Robots: Form, Intelligence, and the Future

1. Organizers

- Jing Huo, Female, Associate Professor, Nanjing University. Corresponding Organizer.
- Jieqi Shi, Female, Assistant Professor, Nanjing University. Corresponding Organizer.
- Tianpei, Female, Assistant Professor, Yang Nanjing University
- Shanghang Zhang, Female, Assistant Professor, Peking University
- Lin Shao, Male, Assistant Professor, National University of Singapore

2. Abstract (max 250 words) and Website

The workshop "Service Robots: Form, Intelligence, and the Future" aims to explore the transformative potential of service robots in reshaping industries and daily life. As society increasingly relies on automation, service robots are becoming critical in healthcare, hospitality, logistics, and beyond. This workshop will highlight the importance of service robots in addressing labor shortages, enhancing efficiency, and improving quality of life. A key focus will be on how advancements in large language models (LLMs) and reinforcement learning are revolutionizing traditional service robotics, enabling smarter decision-making, adaptability, and seamless human-robot interaction.

We will also delve into the evolving forms of service robots, addressing pressing questions: Is an autonomous vehicle a service robot? Must service robots be humanoid to be effective? Are single-unit robots or swarm systems more efficient for complex tasks? These discussions will challenge conventional paradigms and explore innovative designs and applications. By bringing together experts from robotics, AI, and industry, this workshop will foster interdisciplinary dialogue to chart the future of service robotics, emphasizing technological innovation, ethical considerations, and societal impact. Join us to shape the next generation of intelligent, versatile, and socially integrated service robots. Our Website is: service-robot-workshop.github.io

3. Content of the workshop and expected impact

This workshop aims to explore the innovative integration of service robots and new AI technologies in real-world applications, covering key topics shaping the evolution of service robots, focusing on both their technological advancements and their real-world applications. We will discuss:

- The latest technological advancements and challenges in the field of service robots, including LLM, Reinforcement Learning, and other front-end techniques.
- The benefits and challenges of single-unit robots versus multi-robot systems for service

applications.

The evolution of service robot forms, questioning whether humanoid robots are essential or
if alternative designs can be more effective.

This workshop will invite scholars, industry experts, and professionals to share cutting-edge results, inspire in-depth thinking about future technologies, and promote the cross-disciplinary integration and innovation of service robots and large model technologies. We will invite top scholars from all around the world, including **Nanyang Technological University**, **University of Alberta, and Fudan University**, and corporate experts as speakers, with content closely tied to practical applications and frontier technologies, ensuring that all topics reflect the latest developments in the fields of robotics and automation. The content will explore how LLM impact various aspects of service robotics, and interactive sessions will be set up to allow participants to not only listen to expert insights but also engage in discussions on practical issues.

By combining these two rapidly evolving fields—service robots and AI techniques—this workshop will explore their intersection, unveiling new opportunities and technical challenges that traditional robotics cannot cover. This interdisciplinary fusion will bring a fresh perspective to IROS 2025, fostering a deep integration of robotics technology and AI. The workshop will not only cover academic research but also emphasize industry practices, showcasing real-world examples of how new methods are being applied in service robotics. With this diversified content structure, we aim to spark deep discussions among participants from various backgrounds, driving the collision of new ideas and technological innovations.

4. Intended audience and expected attendance

The target audience for this workshop includes researchers, practitioners, and experts from both academia and industry who are working in or are interested in the fields of robotics and AI. Specifically, the workshop will attract those focusing on the intersection of service robots and large language models, as well as those involved in cutting-edge developments in AI, machine learning, and human-robot interaction.

Expected Background of Attendees:

- Robotics researchers specializing in service robots, autonomous systems, and robot perception.
- AI and machine learning experts focusing on large language models, reinforcement learning, and multi-agent cooperation.
- Engineers and developers working on the implementation of AI models in real-world robotic systems and applications in service industries such as healthcare, home services, and

- customer assistance.
- Industry professionals from companies specializing in robotics, AI, and automation technologies.
- Students and early-career professionals eager to learn about the latest advancements in service robotics and AI.

Targeted RAS Technical Committees (TCs) and Other Communities:

The workshop will specifically target the following RAS Technical Committees and related communities:

- Automation in Health Care Management
- Computer&robot vision
- Human robot interaction&coordination
- Safety security and rescue robotics

Also AI and Machine Learning Communities. Researchers from the broader AI community working on the integration of large AI models with robotic systems, as well as developers working with frameworks such as deep learning, reinforcement learning, and natural language processing.

Expected Attendance Estimate:

Based on similar past events at IROS and related conferences, we expect an attendance of 50 to 100 participants. We anticipate that the combination of two rapidly evolving fields—service robotics and LLM—will generate significant interest, particularly among the roboticists, AI researchers, and industry professionals who will benefit from the workshop's interdisciplinary focus.

This estimate reflects the growing interest in the integration of AI into robotics and the success of related workshops at previous IROS conferences.

5. Invited speaker

Bo An(Confirmed)

President's Chair Professor, Nanyang Technological University (NTU).

Male, Senior Professor from academia

Prof. Bo An is a President's Chair Professor and Head of Division of Artificial Intelligence at the College of Computing and Data Science of the Nanyang Technological University (NTU). He is also Director for Centre of AI-for-X of NTU.

Yali Du(Confirmed)

Associate Professor, King's College London

Female, Associate Professor from academia

Dr Yali Du is a Senior Lecturer (Associate Professor) in AI at King's College London, and a Turing Fellow at The Alan Turing Institute. She leads the Cooperative AI Lab. Her research aims to enable machines to exhibit cooperative and safe behaviour in intelligent decision making tasks. Her work focuses on reinforcement learning and multi-agent cooperation, with topics such as generalization, zero-shot coordination, evaluation of human and AI players, and social agency (e.g., human-involved learning, safety, and ethics). She was chosen for the AAAI New Faculty Highlights award (2023), Rising Star in AI 2023. She has given tutorials on cooperative multi-agent learning at ACML 2022 and AAAI 2023. She serves as the editors for Journal of AAMAS and IEEE Transactions on AI, Area Chair for NeurIPS 2024. She also serves in organising committee

for AAMAS 2023 and NeurIPS 2024. Her research is also supported by the Engineering and Physical Sciences Research Council(EPSRC) and AI Safety Insitute (AISI).

Wenchao Ding (Confirmed)

Associate professor, Fudan University

Male, Junior Professor from academia

Dr. Wenchao Ding has rich experience in both academia and industry. Before joining Fudan University, Dr. Wenchao Ding was a research scientist and technical lead at Autonomous Driving Solution (ADS), **Huawei**, where he led a team working on cutting-edge prediction and decision-making problems for autonomous vehicles. He is also the co-founder of Tashi Zhihang, a start-up focusing on embodied AI.

Tao Kong(Confirmed)

Director of Robotics Research, ByteDance Research

Male from industry.

At ByteDance Research, I spearhead research initiatives aimed at developing next - generation robot technologies and systems. My research lies in the field of robot learning and computer vision, with a particular emphasis on devising scalable, AI powered algorithms and systems that enable robots to perceive and act in the real world. I received my Ph.D. from Tsinghua University, advised by Fuchun Sun. I visited the University of Pennsylvania, working with Jianbo Shi.

Lingyun Xu(Confirmed)

Senior Algorithm Architect, Chang'an Technology

Female from industry.

Xu Lingyun, Senior Algorithm Architect of Chang'an Technology. She used to be a doctoral student in the field of artificial intelligence at the Chinese Academy of Sciences, and she once conducted relevant research in the field of artificial intelligence at the Robotics Institute of Carnegie Mellon University.

Stefano V. Albrecht(Confirmed)

Associate Professor, University of Edinburgh Male, Senior Professor from academia

6. Structure of the workshop

The workshop will be structured around a blend of presentations, interactive sessions, and collaborative activities. The goal is to facilitate meaningful exchanges of ideas, encourage critical thinking, and promote collaboration across diverse participants.

1. 6 Keynote Talk

20 minutes per talk + 5 minutes for discussion

The workshop will feature a few carefully selected keynote speakers and expert panels, each focusing on different aspects of service robotics and LLM. These talks will set the stage by sharing the latest research and practical insights.

Each talk will be followed by a 5 minute Q&A session, where attendees can engage with the speakers, ask questions, and deepen the conversation on the presented topics.

2. Lightening talks for Accepted Papers

Duration: 5 * 6 minutes.

Our workshop will encourage participants to submit papers, with a 50-minute session dedicated to presenting accepted submissions(5 papers in total, with each 6 minutes for presentation). We will encourage young researchers to showcase their ideas and engage with the experts in the audience to discuss future development directions.

3. Panel Discussion

Duration: 10 minutes.

We will invite the speakers to select the best paper for our workshop, with a 10-minutes session for the best paper award.

4. Best Workshop Paper

Duration: 10 minutes.

We will invite the speakers to select the best paper for our workshop, with a 10-minutes session for the best paper award.

7. Tentative schedule

Provide a (tentative) program for the workshop.

Time	Talk	Comments
8:30-8:45	Welcome and Introduction	Jing Huo
8:45 - 9:10	From RL-based to LLM-powered agents	Bo An
9:10 - 9:35	Not decided yet	Stefano V. Albrecht
9:35-10:00	Not decided yet	Tao Kong
10:00-10:15	Quick Break	
10:15-10:45	Lightning Talks	
10:45 - 11:10	Not decided yet	Wenchao Ding
11:10-11:35	Towards Cooperative AI agents	Yali Du
11:35-12:00	Not decided yet	Lingyun Xu
12:00-12:10	Panel Discussion	
12:10-12:20	Best Paper	Best Paper Award Session for our workshop

8. Plan to solicit participation

Discuss plans to encourage participation, including e.g., advertisement via mailing lists, social media, advertisement through technical committees, etc. We strongly encourage a description of an inclusiveness plan where new audiences (especially those from minority groups) are encouraged to participate.

We plan to raise awareness, attract participants, and drive engagement for the "Service Robots and Large Models" workshop at IROS 2025 through strategic use of **social media**, **academic partnerships**, and **industry collaborations**.

We will use Twitter, Facebook and Weibo, Redbook to promote our workshop before the workshop. We will create an official account, and post regular updates announcing the theme of the workshop, the confirmed speakers. To attract senior researchers, we will highlight each confirmed speaker with a short bio, photo, and the preliminary title of their talk. And we will invite them to write articles for our account, sharing their views on popular research topics, and attract researchers to register our workshop for a face-to-face discussion.

During the workshop session, we will share real-time updates, photos, and quotes from the workshop, and encourage attendees to share their experiences and tag the event's social media handles. We will further post the accepted paper and the best paper award certificate on both our website and social media after the event.

Moreover, since we have organizers and speakers all over the world, we will make use of our connections in both academy and industry. We will work with partner institutions (both domestic and international) to circulate workshop details through their internal mailing lists, department newsletters, and social media pages. We will try to engage university departments like Robotics, AI, and Computer Science to help spread the word.

Inclusivity and Diversity Efforts:

Through social media and academic partners, we will ensure that the workshop is reaching out to diverse audiences, including students from underrepresented regions, and early-career researchers.

Our organizing team(4 of 5 are women in tech) is proud to have a significantly high representation of women. This is a reflection of our commitment to fostering gender diversity in the field of robotics and AI. We believe that a diverse team brings unique perspectives, drives innovation, and strengthens the quality of scientific exchange. Given the strong female representation in our organizing committee, we aim to actively encourage women researchers, engineers, and students to participate as presenters, speakers, and attendees. This focus on women's involvement will be highlighted in our promotional materials and outreach efforts. Also, we are committed to including speakers from diverse backgrounds, ensuring that a variety of voices contribute to the discussions.

9. Dissemination

Please discuss plans to disseminate the workshop materials (e.g., dissemination of poster abstracts, special issues, etc.). For your planning purposes, logistical support will not be provided for video recordings of workshops.

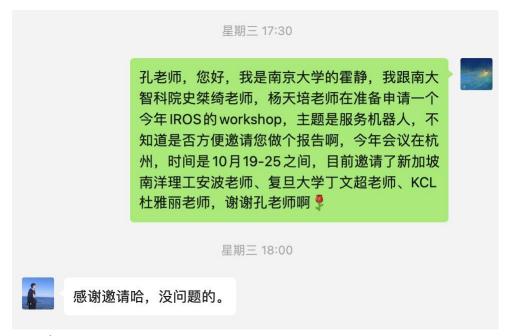
A collection of poster abstracts will be published on our website, and other relevant academic platforms. This will provide attendees and interested parties with easy access to the topics presented at the workshop. We will also encourage presenters to upload their abstracts ahead of time, giving participants the opportunity to review the materials before the event. Besides, we will aim to compile the full set of workshop proceedings (including research papers, presentation slides, and summaries of key discussions) into a digital publication. This publication will be made available for free via our website. Participants who registered for the workshop will receive an email with a link to access the full set of workshop materials, or visit our website to download themselves.

We will share key takeaways, research highlights, and interesting discussions via our workshop's social media accounts. This will include summarizing key talks, sharing research links, and posting engaging visuals or infographics related to the workshop. We plan to create a hashtag for participants to continue discussions post-workshop. This will help foster ongoing collaboration and idea-sharing.

10. Equipment

None

Confirmation of Tao Kong is from Wechat. We attach the chat log and translation here.



Translation:

Jing Huo:

Hello, Professor Kong. My name is Huo Jing from Nanjing University. I am preparing to apply for a workshop on service robots at this year's IROS with Professor Shi Jieqi and Professor Yang Tianpei from the School of Intelligent Sciences at Nanjing University. I was wondering if it would be convenient to invite you to give a presentation. This year's conference will be held in Hangzhou from October 19th to 25th. Currently, we have invited Professor An Bo from Nanyang Technological University in Singapore, Professor Ding Wenchao from Fudan University, and Professor Du Yali from KCL. Thank you, Professor Kong

Tao Kong:

Thank you for the invitation, no problem.

Other emails are attached below.

Fw:RE: Invitation to be a Speaker at the IROS 2025 Workshop on "Service Robots: Form, Intelligence, and the Future"(In Proposal)

发件人: 霍静<huojing@nju.edu.cn> 时 间: 2025年2月19日(星期三) 上午10:04

收件人: 史桀绮<isjieqi@nju.edu.cn>

Jing Huo Department of Computer Science and Technology State Key Laboratory for Novel Software Technology Nanjing University

----- Original

From: "Bo An (Prof)"<boan@ntu.edu.sg>;

Date: Wed, Feb 19, 2025 09:46 AM **To:** "霍静"<huojing@nju.edu.cn>;

Subject: RE: Invitation to be a Speaker at the IROS 2025 Workshop on "Service Robots: Form, Intelligence, and

the Future"(In Proposal)

Dear Prof Huo,

Thank you for your invitation. I am happy to attend the workshop. You can use this title for now: Title: From RL-based to LLM-powered Agents

Best regards,

Во

From: 霍静 <huojing@nju.edu.cn>

Sent: 2025年2月19日 7:32

To: Bo An (Prof) <boan@ntu.edu.sg>

Subject: Invitation to be a Speaker at the IROS 2025 Workshop on "Service Robots: Form, Intelligence, and the

Future"(In Proposal)

[Alert: Non-NTU Email] Be cautious before clicking any link or attachment.

Dear Professor Bo An,

I hope this email finds you well.

My name is Jing Huo, and I am an Associate Professor at Nanjing University. We are proposing a workshop titled "Service Robots: Form, Intelligence, and the Future" at IROS 2025, and we would be honored to invite you as a distinguished speaker to share your expertise with our audience.

This workshop will focus on the latest developments in the field of service robots, specifically how **large models**, **reinforcement learning**, **and multi-agent cooperation methods** are transforming this area. Given your outstanding contributions to this area, we believe your talk would be an invaluable addition to the workshop.

If you are available to participate, we would be delighted if you could give a keynote presentation at October 20th or October 24th, 2025. The workshop will be held **in-person** at **Hangzhou**, **China**. We would greatly appreciate it if you could attend, and we will provide full logistical support for your participation.

If you are able to confirm your involvement, please let us know your availability and **proposed title**. If you have any questions or need further information about the workshop, do not hesitate to reach out.

We are excited about the potential for collaboration and hope you can join us to help shape this exciting event. Thank you for considering this invitation, and we look forward to hearing from you.

Here is the summary of this workshop:

The workshop "Service Robots: Form, Intelligence, and the Future" aims to explore the transformative potential of service robots in reshaping industries and daily life. As society increasingly relies on automation, service robots are becoming critical in healthcare, hospitality, logistics, and beyond. This workshop will highlight the importance of service robots in addressing labor shortages, enhancing efficiency, and improving quality of life. A key focus will be on how advancements in large language models (LLMs) and reinforcement learning are revolutionizing traditional service robotics, enabling smarter decision-making, adaptability, and seamless human-robot interaction.

We will also delve into the evolving forms of service robots, addressing pressing questions: Is an autonomous vehicle a service robot? Must service robots be humanoid to be effective? Are single-unit robots or swarm systems more efficient for complex tasks? These discussions will challenge conventional paradigms and explore innovative designs and applications. By bringing together experts from robotics, AI, and industry, this workshop will foster interdisciplinary dialogue to chart the future of service robotics, emphasizing technological innovation, ethical considerations, and societal impact. Join us to shape the next generation of intelligent, versatile, and socially integrated service robots.

Jing Huo

Jing Huo

School of Computer Science State Key Laboratory for Novel Software Technology Nanjing University

CONFIDENTIALITY: This email is intended solely for the person(s) named and may be confidential and/or privileged. If you are not the intended recipient, please delete it, notify us and do not copy, use, or disclose its contents. Towards a sustainable earth: Print only when necessary. Thank you.

Fw:Re: Invitation to be a Speaker at the IROS 2025 Workshop on "Service Robots: Form, Intelligence, and the Future"(In Proposal)

发件人: 霍静<huojing@nju.edu.cn>

时 间: 2025年2月19日(星期三) 上午10:04

收件人: 史桀绮<isjieqi@nju.edu.cn>

Jing Huo Department of Computer Science and Technology State Key Laboratory for Novel Software Technology Nanjing University

----- Original

From: "Yali Du"<yali.du@kcl.ac.uk>; Date: Wed, Feb 19, 2025 07:49 AM To: "霍静"<huojing@nju.edu.cn>;

Subject: Re: Invitation to be a Speaker at the IROS 2025 Workshop on "Service Robots: Form, Intelligence, and

the Future"(In Proposal)

Dear Jing,

Thank you for your invitation. I would be tentatively happy to speak at the workshop, pending my travel availability. The potential title for my talk is "Towards Cooperative AI Agents."

Best, Yali

Dr. Yali Du

Associate professor Cooperative AI Lab, King's College London Turing Fellow, The Alan Turing Institute

Web: https://yalidu.github.io/

On 18 Feb 2025, at 23:35, 霍静 <huojing@nju.edu.cn> wrote:

You don't often get email from huojing@nju.edu.cn. Learn why this is important

Dear Professor Yali Du,

I hope this email finds you well.

My name is Jing Huo, and I am an Associate Professor at Nanjing University. We are proposing a workshop titled "Service Robots: Form, Intelligence, and the Future" at IROS 2025, and we would be honored to invite you as a distinguished speaker to share your expertise with our audience.

This workshop will focus on the latest developments in the field of service robots, specifically how **large models, reinforcement learning, and multi-agent cooperation methods** are transforming this area. Given your outstanding contributions to this area, we believe your talk would be an invaluable addition to the workshop.

If you are available to participate, we would be delighted if you could give a keynote presentation at October 20th or October 24th, 2025. The workshop will be held **in-person** at **Hangzhou**, **China**. We would greatly

appreciate it if you could attend, and we will provide full logistical support for your participation. If you are able to confirm your involvement, please let us know your availability and **proposed title**. If you have any questions or need further information about the workshop, do not hesitate to reach out. We are excited about the potential for collaboration and hope you can join us to help shape this exciting event. Thank you for considering this invitation, and we look forward to hearing from you.

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Best regards, Jing Huo

Jing Huo Department of Computer Science and Technology State Key Laboratory for Novel Software Technology Nanjing University Re: Invitation to be a Speaker at the IROS 2025 Workshop on "Service Robots: Form, Intelligence, and the Future"(In Proposal)

发件人: Wenchao\x26nbsp;Ding<dingwenchao@fudan.edu.cn>

时 间: 2025年2月18日(星期二) 中午1:59

收件人: 史桀绮<isjieqi@nju.edu.cn>

Dear Prof. Shi,

Thanks for your invitation. I will attend the workshop.

Best,

Wenchao

----Original Messages----

From: 史桀绮 <isjieqi@nju.edu.cn>

Send time: Saturday, 02/15/2025 22:46:27 **To:** dingwenchao <dingwenchao@fudan.edu.cn>

Subject: Invitation to be a Speaker at the IROS 2025 Workshop on "Service Robots: Form, Intelligence, and the

Future"(In Proposal)

Dear Professor Wenchao Ding,

I hope this email finds you well.

My name is Jieqi Shi, and I am an Assistant Professor at Nanjing University. We are proposing a workshop titled "**Service Robots: Form, Intelligence, and the Future**" at IROS 2025, and we would be honored to invite you as a distinguished speaker to share your expertise with our audience.

This workshop will focus on the latest developments in the field of service robots, specifically how **large models**, **reinforcement learning**, **and multi-agent cooperation methods** are transforming this area. Given your outstanding contributions to this area, we believe your talk would be an invaluable addition to the workshop.

If you are available to participate, we would be delighted if you could give a keynote presentation at October 20th or October 24th, 2025. The workshop will be held **in-person** at **Hangzhou, China**. We would greatly appreciate it if you could attend, and we will provide full logistical support for your participation.

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Best regards, Jieqi Shi Assistant Professor, Nanjing University Re: Invitation to be a Speaker at the IROS 2025 Workshop on "Service Robots: Form, Intelligence, and the Future"(In Proposal)

发件人: Lingyun\x26nbsp;Xu<xulingyun2021@gmail.com>

时 间: 2025年3月14日(星期五) 晚上11:57

收件人: 史桀绮<isjieqi@nju.edu.cn>

I would be happy to participate!

On Fri, Mar 14, 2025 at 9:55 PM 史桀绮 <isjieqi@nju.edu.cn> wrote:

Dear Dr. Xu,

I hope this email finds you well.

My name is Jieqi Shi, and I am an Assistant Professor at Nanjing University. We (including Prof. Huo Jing from NJU, Professor Zhang Shanghang from PKU, and Professor Shao Lin from NUS) are proposing a workshop titled "Service Robots: Form, Intelligence, and the Future" at IROS 2025, and we would be honored to invite you as a distinguished speaker to share your expertise with our audience.

This workshop will focus on the latest developments in the field of service robots, specifically how large models, reinforcement learning, and multi-agent cooperation methods are transforming this area. Given your outstanding contributions to this area, we believe your talk would be an invaluable addition to the workshop. The confirmed speakers include: Professor An Bo from NTU, Professor Du Yali from KCL, Professor Ding Wenchao from Fudan University, and Dr. Kong Tao from ByteDance.

If you are available to participate, we would be delighted if you could give a keynote presentation at October 20th or October 24th, 2025. The workshop will be held **in-person** at **Hangzhou**, **China**. We would greatly appreciate it if you could attend, and we will provide full logistical support for your participation.

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Best regards, Jiegi Shi

Assistant Professor, Nanjing University

Re:Re: Invitation to be a Speaker at the IROS 2025 Workshop on "Service Robots: Form, Intelligence, and the Future"(In Proposal);

发件人: 史桀绮<isjieqi@nju.edu.cn> 时间: 2025年3月15日(星期六) 晚上6:48 收件人: ste.albre<ste.albre@gmail.com>

Dear Stefano,

We are pleased to confirm that, should our workshop proposal be successfully approved, we will cover the cost of your **round-trip flights between any location (e.g., the UK) and China**. If your itinerary includes intermediate layovers (e.g., $UK \rightarrow Singapore$ with a multi-day stopover before entering China), reimbursement would likely apply only to the Singapore-China round-trip segment. Such cases require separate approval through the university's special application process. We recommend consulting with us in advance to clarify reimbursement procedures.

Additionally, once you enter China, we will cover the cost of your round-trip flights between your port of entry city and Hangzhou, as well as accommodation and meals during the conference period.

Please let us know your travel plans and any further assistance you may require.

Best regards, Jieqi

顺颂时祺!

史桀绮

南京智能科学与技术学院 助理教授

------ Original

From: "Stefano Albrecht";

Date: 2025年3月15日(星期六)下午2:11

To: "史桀绮";

Subject: Re: Invitation to be a Speaker at the IROS 2025 Workshop on "Service Robots: Form, Intelligence, and

the Future"(In Proposal);

Dear Jieqi,

Thank you very much for the kind invitation.

we will provide full logistical support for your participation.

I was not planning to attend IROS this year, but the workshop sounds highly relevant and I might be able to combine this trip with some other activities (tbc). Would you be able to cover the cost of travel, hotel, and conference registration (if needed)?

Thanks, Stefano

On 10 Mar 2025, at 17:55, 史桀绮 <isjieqi@nju.edu.cn> wrote:

Dear Professor Stefano V. Albrecht,

I hope this email finds you well.

My name is Jieqi Shi, and I am an Assistant Professor at Nanjing University. We (including Prof. Huo Jing from NJU, Professor Zhang Shanghang from PKU, and Professor Shao Lin from NUS) are proposing a workshop titled "Service Robots: Form, Intelligence, and the Future" at IROS 2025, and we would be honored to invite you as a distinguished speaker to share your expertise with our audience.

This workshop will focus on the latest developments in the field of service robots, specifically how **large models, reinforcement learning, and multi-agent cooperation methods** are transforming this area. Given your outstanding contributions to this area, we believe your talk would be an invaluable addition to the workshop. The confirmed speakers include: Professor **An Bo** from NTU, Professor **Du Yali** from KCL, Professor **Ding Wenchao** from Fudan University, and Dr. **Kong Tao** from ByteDance.

If you are available to participate, we would be delighted if you could give a keynote presentation at October 20th or October 24th, 2025. The workshop will be held **in-person** at **Hangzhou**, **China**. We would greatly appreciate it if you could attend, and we will provide full logistical support for your participation.

If you are able to confirm your involvement, please let us know your availability and **proposed title**. If you have any questions or need further information about the workshop, do not hesitate to reach out.

We are excited about the potential for collaboration and hope you can join us to help shape this exciting event. Thank you for considering this invitation, and we look forward to hearing from you.

Here is the summary of this workshop:

The workshop "Service Robots: Form, Intelligence, and the Future" aims to explore the transformative potential of service robots in reshaping industries and daily life. As society increasingly relies on automation, service robots are becoming critical in healthcare, hospitality, logistics, and beyond. This workshop will highlight the importance of service robots in addressing labor shortages, enhancing efficiency, and improving quality of life. A key focus will be on how advancements in large language models (LLMs) and reinforcement learning are revolutionizing traditional service robotics, enabling smarter decision-making, adaptability, and seamless human-robot interaction.

We will also delve into the evolving forms of service robots, addressing pressing questions: Is an autonomous vehicle a service robot? Must service robots be humanoid to be effective? Are single-unit robots or swarm systems more efficient for complex tasks? These discussions will challenge conventional paradigms and explore innovative designs and applications. By bringing together experts from robotics, AI, and industry, this workshop will foster interdisciplinary dialogue to chart the future of service robotics, emphasizing technological innovation, ethical considerations, and societal impact. Join us to shape the next generation of intelligent, versatile, and socially integrated service robots.

Best regards, Jieqi Shi Assistant Professor, Nanjing University