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2018-2022
2023-2027

CALL FOR EXPRESSION OF INTEREST FOR MSCA POSTDOCTORAL FELLOWSHIPS AT POLITECNICO DI BARI

Research project

Nome and Surname: Prof. Giulio Reina

Title: Next generation of autonomous farmer robots

Description:

The [Robotic Mobility Lab](#) (RML) of the Polytechnic University of Bari (POLIBA) invites ambitious postdoctoral researchers to apply for a Marie Skłodowska-Curie Actions (MSCA) Postdoctoral Fellowship 2026 in agricultural mobile robotics.

Offer description

The proposed project focuses on advancing **navigation, mapping, and dynamic locomotion** for autonomous agricultural robots operating in complex and unstructured environments. The research will contribute to the development of **next-generation robotic systems** for open-field agriculture and **Controlled Environment Agriculture (CEA)**. Research interests include but are not limited to:

- Implement AI approaches for crop sensing, growth, and stress monitoring [2].
- Develop integrated hardware and software for AI-driven robotic and automation systems in CEA with software programming ability (C++ and Robot Operating System ROS 1/2) [3]
- Lead activities such as design, test, verification, modification, fabrication, and assembly of robotic and automation systems [4]

The research will be developed @ [the Robotic Mobility Lab](#), Polytechnic University of Bari, Italy in synergies with projects funded by the European Community (Horizon, ERA-NET) and by the Italian Ministry of Research and University.

Poliba members benefit from regular training sessions, workshops, international conference participation, and publication support, providing an excellent foundation for career development.

Available facilities include:

State-of-the-art sensors for robotic perception, various tracked and wheeled mobile robots, and testbeds for performance characterization.

Candidates must be eligible according to the criteria established by the 2026 MSCA Postdoctoral fellowship call:



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To have a PhD by the call deadline (September 9, 2026)

To have up to 8 years of research experience after PhD

To be citizens of an EU State or of an Associated Country

Not to have resided or carried out their main activity in Italy for more than 12 months in the 36 months before the call deadline (September 9, 2026). Besides, candidates should be fluent in English, should have an excellent teamwork attitude, organizational skills, and the ability to work in a multidisciplinary environment.

[1] A. Ugenti, R. Galati, G. Mantriota, G. Reina, Analysis of an all-terrain tracked robot with innovative suspension system, Mechanism and Machine Theory, 182, 2023,

<https://doi.org/10.1016/j.mechmachtheory.2023.105237>.

[2] Milella A., Marani R., Petitti A., Reina G., “[In-field high throughput grapevine phenotyping with a consumer-grade depth camera](#)“, Computers and Electronics in Agriculture, 156, pp. 293-306, 2019.

[3] Vulpi F, Marani R, Petitti A, Reina G, Milella A, “[An RGB-D multi-view perspective for autonomous agricultural robots](#)“, Computers and Electronics in Agriculture, Vol. 202, November 2022, 107419

[4] Galati R., Pappalettera A., Mantriota, G., Reina G., “[Rubber tracks and tyres: a detailed insight into force analysis during obstacle negotiation](#)“, Vehicle System Dynamics, 63(6), 1036–1053.
<https://doi.org/10.1080/00423114.2024.2366528>

Candidates should provide detailed CV

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- to have a PhD by the call deadline.
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- not to have resided or carried out their main activity in Italy for more than 12 months in the 36 months before the call deadline.

Contacts

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