

## Special Issue

# Abiotic Stress Influences on Plant-Associated Microbial Communities: Molecular Genetic and Metabolic Responses

### Message from the Guest Editors

Plant-associated microorganisms can enhance plant resistance to unfavorable environmental conditions, such as boosting plant response through the production of growth-promoting molecules, triggering the activation of specific metabolic pathways and metabolizing hazardous molecules. The continuous aggravation of the global climatic scenario has raised concerns surrounding worldwide ecosystem functionality alterations and biodiversity loss. The increasing accessibility of multiomics techniques offers the possibility to accumulate data at an unprecedented pace and precision. However, a stronger integration of plant-associated microbiome data accompanied by plant physiological and biochemical processes, as well as soil biogeochemical cycles. This Special Issue aims to collect research on, but not limited to, plant–microbe interactions under extreme climatic events or environmental pollution, endophytic community composition and functional diversity in the soil–plant–atmosphere continuum, its role in abiotic stress mitigation, the effect of microbiome engineering on plant resistance, associations between microbial strains and plant defense mechanisms.

### Guest Editors

Dr. Giovanni Emiliani

Institute for Sustainable Plant Protection (IPSP), SS Sesto Fiorentino, National Research Council (CNR), Via Madonna del Piano 10, 50019 Sesto Fiorentino, Italy

Dr. Silvia Traversari

Research Institute on Terrestrial Ecosystems (IRET), National Research Council (CNR), Via Giuseppe Moruzzi 1, 56124 Pisa, Italy

### Deadline for manuscript submissions

closed (15 August 2023)



## Forests

an Open Access Journal  
by MDPI

Impact Factor 2.5  
CiteScore 4.6



[mdpi.com/si/143446](https://mdpi.com/si/143446)

*Forests*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[forests@mdpi.com](mailto:forests@mdpi.com)

[mdpi.com/journal/  
forests](https://mdpi.com/journal/forests)





# Forests

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 4.6



[mdpi.com/journal/  
forests](https://mdpi.com/journal/forests)



## About the Journal

### Message from the Editor-in-Chief

*Forests* (ISSN 1999-4907) is an international and cross-disciplinary, scholarly forestry journal. The distinguished editorial board and refereeing process ensures the highest degree of scientific rigor and review of all published articles. Original research articles and timely reviews are released online, with unlimited free access. Our goal is to have *Forests* be recognized as one of the foremost publication outlets for high quality, leading edge research in this broad and diverse field. We therefore invite you to be one of our authors, and in doing so share your important research findings with the global forestry community.

---

### Editor-in-Chief

Prof. Dr. Giacomo Alessandro Gerosa

Department of Mathematics and Physics, Catholic University of Brescia,  
I-25121 Brescia, Italy

---

### Author Benefits

#### High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, GEOBASE, PubAg, AGRIS, PaperChem, and other databases.

#### Journal Rank:

JCR - Q2 (Forestry) / CiteScore - Q1 (Forestry)

#### Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.8 days after submission; acceptance to publication is undertaken in 2.5 days (median values for papers published in this journal in the second half of 2025).