Forestry Robotics and Digital Forest Operations (Special Issue in Collaboration with ICRA 2022 IFRRIA Workshop)

Guest Editors:

Dr. David Portugal

Dr. João Filipe Ferreira

Dr. Francisco J. Yandún

Deadline for manuscript submissions:
closed (31 May 2023)

Message from the Guest Editors

The increasing lack of manpower and the progressive abandonment of rural areas and practices such as pastoralism have driven forestry to become increasingly mechanized in order to increase productivity.

This SI will showcase this exciting and important area of application, and presenting recent achievements in research on forestry robotics. It will bring together some of the contributions presented at the IEEE ICRA 2022 Workshop on Innovation in Forestry Robotics: Research and Industry Adoption

(IFRRIA, https://labs.ri.cmu.edu/ifrria-icra-2022/). Potential topics include, but are not limited to:

-Artificial sensing and perception for forestry robotics;

-Multisensory systems and fusion (LIDAR, depth cameras, multispectral imaging, etc.);

-Neural networks and machine learning approaches (semantic mapping, object detection, dynamic tracking, etc.);

-Inventory, monitoring and wildfire fighting applications;

-Outdoor (semi-)autonomous navigation, traversability and locomotion of UGVs and/or UAVs for robots in the wilderness;

-Planning and decision-making architectures for forestry robotics under high uncertainty;

Special Issue

Editors-in-Chief

Prof. Dr. Cate Macinnis-Ng
Department of Biological Sciences, Faculty of Science, University of Auckland, Private Bag 92019, Auckland 1142, New Zealand

Prof. Dr. Giacomo Alessandro Gerosa
Department of Mathematics and Physics, Catholic University of Brescia, I-25121 Brescia, Italy

Message from the Editorial Board

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