# RESEARCH GRANT FUND REPORT 2025

Safe Arborist Techniques Fund Grant Program

The Safe Arborist Techniques Fund (SATF) is a joint program of TREE Fund and International Society of Arboriculture (ISA), established in 2015 to support research and development into the techniques and equipment that arborists use in climbing, rigging, and working on trees, and the means of identifying potential hazards, to provide a safer working environment.

Leonardo Bianchini of University of Tuscia

## TOTAL DONATIONS

January 1 – December 31, 2025: $10,000 (of $50,000 pledge)

**Gifts over $500**

- Lewis Services

## AWARDED IN 2025

2025 Safe Arborist Techniques Fund Grant was awarded to Leonardo Bianchini of University of Tuscia, Department of Agriculture and Forestry Services (Italy) for the project, "Tree Risk During Rigging Operations: Identifying Biomechanical Risk Factors for Arborist Safety – TRIAS." for **$15,000.**

## 1 APPLICATIONS

3 applications were received for this grant during the 2025 Fall Grant Application Cycle.

## 2 ADDITIONAL REPORTS

No research programs were completed in 2025

## AWARDEE DETAILS

Although a previous TREE Fund project (Follett, 2019) examined load distribution in rigging systems, little is known about the biomechanical response of trees during operations, particularly trunk and root plate oscillations and their implications for safety. Factors thought to influence kickback, such as wood elasticity by species or slenderness ratio (height/diameter), have not been validated by specific measurements or systematically analyzed in operational contexts. No study has yet combined pre-intervention diagnostics (static and dynamic tests) with real-time monitoring during cutting under actual rigging conditions.

This project addresses that gap. Static pulling tests and dynamic measurements with inclinometers will be conducted on selected trees before rigging, followed by real-time monitoring during operations, focusing on stem and root plate oscillations. Analyses will include tree species, soil conditions (moisture and texture to assess root-soil adhesesion and anchorage), presence of defects, root damage, cutting direction, and loads from falling trunk sections.

**Completed research in 2025:**
Lawrence J. Kahn
"Can Mandatory Minimum Clearance Requirements Between Trees and Powerlines Successfully Reduce Injuries and Death to Workers and the Public?"