



TrimBot2020



WAGENINGEN
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The TrimBot2020 project researches the robotics and vision technologies to prototype the first outdoor garden trimming robot. The robot will navigate over varying terrain, approach rose bushes, hedges and boxwood topiary, to trim them to an ideal shape. The robot will be based on a modified Bosch Indego robot lawnmower, which will navigate using a user-defined garden map and 3D scene analysis, and then visually servo a novel electric plant cutter.



THE UNIVERSITY
of EDINBURGH



BOSCH

ETH Zürich



university of
 groningen



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The main contributions of Wageningen University & Research in TrimBot2020:

- Design and construction of the manipulator and cutting tools capable of performing the specified tasks.
- Motion planning for the manipulator and the implementation of a navigation and trimming servoing mechanism.
- Support decisions on when and where to trim each plant using functional-structural plant models (FSPM). Such models integrate the simulation of structure (e.g. leaf shape, branching) and function (i.e. physiology) in one dynamic model, thus predicting plant growth and appearance.



European Commission

www.trimbot2020.org

