

# Curriculum Vitae

## Personal information

Surname **Bernardi**  
First name **Bruno**  
E-mail [bruno.bernardi@unirc.it](mailto:bruno.bernardi@unirc.it)

## Work experience

- Dates (from-to)
- Employer's name and address
- Main activities and responsibilities

AA. 2023/2024-ongoing

### **University of Calabria and University "Mediterranea" of Reggio Calabria**

Director of Class A-51 "Agricultural Sciences, Technologies and Techniques" activated within the framework of the 60 - 30 CFU qualifying training courses, pursuant to DPCM 04/08/2023 and DM 59/2017 for the training of secondary school teachers at I and II levels.

Courses activated:

- 1) 30cfu- Art. 13 DPCM 4/8/2023 - A.A. 2023/24 (4 May-22 July).
- 2) 60cfu and 30cfu - Art.2 DPCM 4/8/2023 - A.A. 2023/24 (26 August - 23 November)

- Dates (from-to)
- Employer's name and address
- Main activities and responsibilities

AA. 2023/2024-ongoing

### **University of Calabria and University "Mediterranea" of Reggio Calabria**

Lecturing activities in the framework of the 60 - 30 CFU qualifying training courses, pursuant to DPCM 04/08/2023 and DM 59/2017 for the training of secondary school teachers at I and II levels.

Below are the courses held as part of the activated pathways

- 1) 30cfu- Art. 13 DPCM 4/8/2023 - A.A. 2023/24 (4 May-22 July).  
Agricultural Mechanisation course (12 hours, 2 credits)
- 2) 60cfu and 30cfu - Art.2 DPCM 4/8/2023 - A.A. 2023/24 (26 August - 23 November)  
Agricultural Mechanisation' course (12 hours, 2 credits)

- Dates (from-to)
- Employer's name and address
- Main activities and responsibilities

November 2022

### **University of Cordoba (ES), Department of Agriculture Engineering**

Lecturer in the degree course "Ingeniería Agroalimentaria y del medio rural" (10 hours), in the framework of the Erasmus + Staff Mobility for Teaching 2022-2023 programme

- Dates (from-to)
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July 19<sup>th</sup> 2022

### **University "Mediterranea" of Reggio Calabria - Department of Agriculture**

#### **Associate Professor**

GSD 07/AGRI-04 - Agricultural, Forestry and Biosystems Engineering, SSD AGRI-04/B - Agricultural Mechanics

- Dates (from-to)
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- Main activities and responsibilities

2023/2024

### **University "Mediterranea" of Reggio Calabria - Department of Agriculture**

Lecturer in the course "Agricultural Machinery and Plants" (3 credits) of the integrated course "Irrigation Systems and Agricultural Machinery and Plants" (9 credits) (Master's Degree in Agricultural Science and Technology) - SSD AGR / 09

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- Main activities and responsibilities

2020/2021 - Ongoing

### **University "Mediterranea" of Reggio Calabria - Department of Agriculture**

Lecturer in the course "Mechanization of green areas" (6 credits) (Master's Degree in Forestry and Environmental Sciences - Management of green areas) - SSD AGR / 09

- Dates (from-to)
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- Main activities and responsibilities

2019/2020- Ongoing

### **University "Mediterranea" of Reggio Calabria - Department of Agriculture**

Lecturer for the module "Equipment and systems for gastronomic production and catering" (6 credits) of the integrated course "Buildings and systems for catering" (12 credits) (Master's Degree in Food Science and Technology - Curriculum "Gastronomy and Catering") - AGR / 09 SSD

<ul style="list-style-type: none"> <li>• Dates (from-to)</li> <li>• Employer's name and address</li> <li>• Main activities and responsibilities</li> </ul>	<p>July 18<sup>th</sup> 2019 – July 18<sup>th</sup> 2022</p> <p><b>University "Mediterranea" of Reggio Calabria - Department of Agriculture</b></p> <p><b>"Tenure-track" Senior Research Assistant</b>, according to art. 24 paragraph 3 letter b - "senior" contract- Law 240/2010 (RtdB), competition sector 07 / C1 - Agricultural, Forestry and Biosystems Engineering, SSD AGR / 09 - Agricultural Mechanics, Macro-sector 07 / C - Agricultural, Forestry and Biosystems Engineering.</p>
<ul style="list-style-type: none"> <li>• Dates (from-to)</li> <li>• Employer's name and address</li> <li>• Main activities and responsibilities</li> </ul>	<p>2017/2018 AY</p> <p><b>University "Mediterranea" of Reggio Calabria - Department of Agriculture in collaboration with the Metropolitan City of Reggio Calabria</b></p> <p>II Level Master for Expert Technician on "The bergamot of Reggio Calabria. Production and enhancement"</p> <p><b>Lecturer</b> for the module "Mechanization of cultivation and pruning operations" (10 hours)</p>
<ul style="list-style-type: none"> <li>• Dates (from-to)</li> <li>• Employer's name and address</li> <li>• Main activities and responsibilities</li> </ul>	<p>February 1<sup>st</sup> 2018- January 31<sup>st</sup> 2019</p> <p><b>University "Mediterranea" of Reggio Calabria - Department of Agriculture</b></p> <p><b>Research fellow</b>. Research title: "<i>Evaluation of the metabolic consumption of workers in agriculture</i>". SSD AGR / 09</p>
<ul style="list-style-type: none"> <li>• Dates (from-to)</li> <li>• Employer's name and address</li> <li>• Main activities and responsibilities</li> </ul>	<p>December 11<sup>th</sup> -14<sup>th</sup> 2017</p> <p><b>Ministry of Education, University and Research (MIUR – Italy)</b> – Department of Education System and training – General Direction of School systems and evaluation of the national education system (decree prot. N.0013787 of 31/10/2017)</p> <p><b>President of examination commission</b> according to L. 107/2015 for the evaluation of students' acquired competences at the end of trainings of "Fondazione Istituto Tecnico Superiore (ITS) Nuove tecnologie per il Made in Italy - Sistema alimentare - Albatros" at the Technical High School "Antonello" - Messina.</p>
<ul style="list-style-type: none"> <li>• Dates (from-to)</li> <li>• Employer's name and address</li> <li>• Main activities and responsibilities</li> </ul>	<p>2016/2017-2017/2018- 2018/2019 AY</p> <p><b>University "Mediterranea" of Reggio Calabria - Department of Agriculture</b></p> <p>PhD in Agricultural, Food and Forestry Sciences - cycles XXXII-XXXIII-XXXIV</p> <p><b>Lecturer of the module "Agricultural mechanics and post-harvest plant engineering: theoretical-applicative systems and experimental methodologies</b> "(2 credits) within the SSD Agr / 09 - Agricultural Mechanics</p>
<ul style="list-style-type: none"> <li>• Dates (from-to)</li> <li>• Employer's name and address</li> <li>• Main activities and responsibilities</li> </ul>	<p>2015/2016 AY</p> <p><b>University "Mediterranea" of Reggio Calabria - Department of Agriculture</b></p> <p>II Level Master on "New products and processes for the olive-growing and oil production chain"</p> <p><b>Lecturer of the module "Mechanization of harvesting operations</b> "(8 hours)</p>
<ul style="list-style-type: none"> <li>• Dates (from-to)</li> <li>• Employer's name and address</li> <li>• Main activities and responsibilities</li> </ul>	<p>2015/2016 AY - 2016/2017 AY</p> <p><b>University "Mediterranea" of Reggio Calabria - Department of Agriculture</b></p> <p><b>Lecturer of the module "Agricultural machines and plants"</b> - 3 credits <i>within</i> Agricultural Sciences and Technologies II° level degree Program</p>
<ul style="list-style-type: none"> <li>• Dates (from-to)</li> <li>• Employer's name and address</li> <li>• Main activities and responsibilities</li> </ul>	<p>December 9<sup>th</sup> -13<sup>th</sup>, 2013</p> <p><b>Ministry of Education, University and Research (MIUR – Italy)</b> – Department of Education – General Direction of Education, High Technical Training and for the Relationship with Regional Training Systems (decree protocol. N. 1841/AOODGPS of 02/12/2013)</p>
<ul style="list-style-type: none"> <li>• Dates (from-to)</li> <li>• Employer's name and address</li> <li>• Main activities and responsibilities</li> </ul>	<p><b>President of examination commission</b> according to D.I. February 7<sup>th</sup>, 2013 for the evaluation of students' acquired competences at the achievement of "Fondazione Istituto Tecnico Superiore (ITS) Nuove tecnologie per il Made in Italy - Sistema alimentare - Albatros" trainings at the Technical High School "Antonello" - Messina.</p>
<ul style="list-style-type: none"> <li>• Dates (from-to)</li> <li>• Employer's name and address</li> <li>• Main activities and responsibilities</li> </ul>	<p>2013/2014 AY – 2014/2015 AY</p> <p><b>University "Mediterranea" of Reggio Calabria - Department of Agriculture</b></p> <p><b>Lecturer of the module "Forestry mechanization"</b> – 6 credits <i>within</i> Forestry and Environmental Sciences I° level degree Program</p>
<ul style="list-style-type: none"> <li>• Dates (from-to)</li> </ul>	<p>February 1, 2013 – January 31, 2018</p>

- Employer's name and address
- Main activities and responsibilities

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- Dates (from-to)
- Name and type of organization providing education and training
- Principal subjects/occupational skills covered

**University "Mediterranea" of Reggio Calabria - Department of Agriculture**

**"Non-tenured" Junior Researcher (RTDa)** for the Sector 07/C1 – Agricultural, Forestry and Biosystems Engineering, Disciplinary Scientific Sector AGR/09 – Agricultural Mechanics, Macrosector 07/C - Agricultural, Forestry and Biosystems Engineering.

2012/ 2013 AY

**University "Magna Grecia" of Catanzaro – School of Pharmacy and Neutraceuticals**

**Contract Lecturer of the module "Industrial processing technologies and systems" – 2 credits within the course of Food Sciences and Technologies – Applied Biotechnologies to Nutrition II° Level degree Program**

2012/ 2013 AY

**University "Mediterranea" of Reggio Calabria - Department of Agriculture**

**Contract Lecturer of the module "Post-harvest machines and plants" 3 credits within the course of Agro-industrial Engineering – Agricultural and Food Sciences and Technologies II° level degree program**

November 17<sup>th</sup>, 2011- August 8<sup>th</sup>, 2012

**University "Mediterranea" of Reggio Calabria – Faculty of Agriculture, Department of Agroforestry and Environmental Sciences and Technologies (DiSTAfA)**

**Contractor for Technological development activity in the framework of WP3 - "Sustainable mechanization of agricultural practices and post-harvest operations"**

Institutional Program Agreement – Framework Program Agreement – Scientific Research and Technological Innovation in Calabria Region – I° Integrative Act – Action 3 "Chain innovation for PGI Tropea red onion valorisation"

2010/2011 AY

**University "Mediterranea" of Reggio Calabria – Faculty of Agriculture**

**Contract Lecturer of the modules:**

- **Machines and plants for the Agro-industry**, 3 credits, within the Course of Agro-food Industry Engineering, Food Sciences and Technologies I° level degree Program
- **"Forestry mechanization"** – 6 credits within the Course of Forestry Mechanization and Timber Technologies - Forestry and Environmental Sciences I° level degree Program

2010/2011 AY

**University "Mediterranea" of Reggio Calabria - Department of Agroforestry and Environmental Sciences and Technologies (DiSTAfA)**

**Contractor for scientific support activities for the realization of by-products recovery and valorisation structures in olive oil industry**

Research project "Energetic Stone" – realization of a sustainable and innovative plant able to separate olive stones from the pomace for energetic valorisation of olive oil industries by-products, in the framework of the Institutional Program Agreement – Framework Program Agreement – Scientific Research and Technological Innovation in Calabria Region

2009/ 2010 AY

**Serra S. Bruno Municipality (VV) Italy - University "Mediterranea" of Reggio Calabria – Department of Agricultural and Forestry Management (GESAF)**

**Member of the working group "forest mechanization" in the framework of the Agreement between the Municipality of Serra S. Bruno and the Department of Management of Agricultural and Forestry Systems (GESAF) of the Mediterranean University of Reggio Calabria for the drafting of the "Forests Management Plan of Serra San Bruno valid for the period 2010-2029**

July, 2009 – June, 2010

**University "Mediterranea" of Reggio Calabria,**

**Faculty of Agriculture**

**Research fellow. Research title "The development of mechanization in oliculture".**

<ul style="list-style-type: none"> <li>• Dates (from-to)</li> <li>• Employer's name and address</li> </ul>	2009
• Main activities and responsibilities	<b>University "Mediterranea" of Reggio Calabria</b> <b>Lecturer</b> First Level International Master in "Technological Innovation and Sustainability of Mediterranean oliculture". <b>Lecturer</b> for the module Olive Grove Mechanization (10 ore)
<ul style="list-style-type: none"> <li>• Dates (from-to)</li> <li>• Employer's name and address</li> </ul>	<i>March, 2009 – May, 2009</i>
• Main activities and responsibilities	<b>Italia Lavoro S.P.A. Ministry of Labour and Social Policies, University "Mediterranea" of Reggio Calabria - Department of Agroforestry and Environmental Sciences and Technologies (DiSTAfA), Germinal s.n.c</b> <b>Lecturer</b> <i>FlxO Program "Training and Innovation for Employment - Action 3. Training Course: Expert in technology transfer for Innovation, Design and Management of grass turf in Mediterranean environments (ETE)</i>
<ul style="list-style-type: none"> <li>• Dates (from-to)</li> <li>• Employer's name and address</li> <li>• Principal subjects/occupational skills covered</li> </ul>	<i>December, 2008 – March, 2009</i> <b>Ce.R.T.A. Soc. cons. a r. l.- Centri Regionali per le Tecnologie Agroalimentari</b> <b>University "Mediterranea" of Reggio Calabria, Faculty of Agriculture - Dip. STAFA</b> <b>Fellowship for "TECHNOLOGY TRANSFER IN FOOD INDUSTRY"</b> within the National Operative Program "Scientific Research, Technological Development, High Training 2000-2006 - Measures II.3 and III.2
<ul style="list-style-type: none"> <li>• Dates (from-to)</li> <li>• Employer's name and address</li> <li>• Title of qualification awarded</li> </ul>	<i>01/11/2005 - 31/10/2008</i> <b>University "Mediterranea" of Reggio Calabria,</b> <b>Faculty of Agriculture</b> <b>Ph.D. in Agroforestry and Environmental Engineering.</b> Thesis Title: "Experiments on mechanization of super-intensive olive orchards in Spain"

## Education and training

<ul style="list-style-type: none"> <li>• Dates (from-to)</li> <li>• Name and type of organization providing education and training</li> <li>• Principal subjects/occupational skills covered</li> </ul>	February 9 <sup>th</sup> -11 <sup>th</sup> , 2015 <b>Italian Society of Agronomy at the Department of Agricultural, Environmental and Food Sciences, University of Torino</b> <b>Statistics Course:</b> "Statistic methodologies for agricultural sciences. Statistical models and errors management"
<ul style="list-style-type: none"> <li>• Dates (from-to)</li> <li>• Name and type of organization providing education and training</li> <li>• Title of qualification awarded</li> </ul>	<i>2010 – 2011</i> <b>University "Mediterranea" of Reggio Calabria,</b> <b>Faculty of Engineering</b> <b>II Level Master's Degree in Environmental Engineering (Monitoring and Environmental Control)</b> 110/110
<ul style="list-style-type: none"> <li>• Dates (from-to)</li> <li>• Name and type of organization providing education and training</li> <li>• Principal subjects/occupational skills covered</li> </ul>	<i>2007-2008 / 2008-2009 / 2009-2010 AY</i> <b>University "Mediterranea" of Reggio Calabria,</b> <b>Faculty of Agriculture</b> <b>Teaching assistant in "Agricultural Mechanics"</b>
<ul style="list-style-type: none"> <li>• Dates (from-to)</li> <li>• Name and type of organization providing education and training</li> </ul>	<i>October, 2006 – February, 2007 and January, 2008 – March, 2008</i> ▪ <b>UNIVERSIDAD DE CORDOBA - E.T.S.I. AGRONOMOS Y MONTES</b> <b>DEPARTAMENTO DE AGRONOMIA, CORDOBA (SPAGNA)</b>

- Principal subjects/occupational skills covered

- Dates (from-to)

- Name and type of organization providing education and training

- Principal subjects/occupational skills covered

- Dates (from-to)

- Name and type of organization providing education and training

- Principal subjects/occupational skills covered

- Title of qualification awarded

▪ **IRTA (INSTITUT DE RECERCA I TECNOLOGIES AGROALIMENTARIES) - CENTRO DE MAS DE BOVER, CONSTANTÍ [ TARRAGONA] - DEPARTAMENTO DE ARBORICULTURA MEDITERRANEA**

Traineeship in the framework of PhD studies

October, 2006

**University "Mediterranea" of Reggio Calabria,**

**Faculty of Agriculture**

Statistics Course

2005

**University "Mediterranea" of Reggio Calabria,**

**Faculty of Agriculture**

Chemistry; environmental conservation and protection; forestry systems management; agricultural law and forestry legislation; economics and forest policy; forestry and environmental economics; management and utilization of agro-forestry resource in mountains; integrated forestry planning; silviculture, forestry and environmental planning; wood technology and forestry utilization.

**Degree in Environmental Sciences and Forestry**

**Curriculum "Forest resources Management "**

**110/110 cum laude**

## Other skills and competences

**Scientific Director** of the "Agricultural and food mechanization" laboratory at the University "Mediterranea" of Reggio Calabria, Department of Agriculture.

**Academic Ordinary** of "Accademia Nazionale dell'Olivo e dell'Olio"

**Academic Correspondent** of "Accademia Italiana di Scienze Forestali"

**Ordinary member** of the Italian Association of Agricultural Engineering (AlIA)

Collaborations in research projects and scientific responsibilities:

- Member of the Research Unit within the PRIN 2007 - Scientific Research Program of Relevant National Interest entitled "Mechanical distribution of auxiliaries in organic crops" in collaboration with the University of Reggio Calabria, Faculty of Agriculture.
- Participation in research activities within the Rdb 2006 Scientific Research Program (formerly 60%) entitled "Organization of work sites in mechanized agricultural companies", in collaboration with the University "Mediterranea" of Reggio Calabria, Faculty of Agriculture
- Participation in research activities within the Rdb 2007 Scientific Research Program (formerly 60%) entitled "Evaluation of operational and management aspects of mechanical and mechanized work in agricultural companies" in collaboration with the University "Mediterranea" of Reggio Calabria, Faculty of Agriculture.
- Participation in research activities within the Rdb 2007 Scientific Research Program (formerly 60%) entitled "Ergonomics and safety in the agro-forestry sector" in collaboration with the University "Mediterranea" of Reggio Calabria, Faculty of Agriculture.
- Participation in research activities within the Research Convention (2004) "Machines for the distribution of pesticides in Calabria" in collaboration with the University "Mediterranea" of Reggio Calabria, Faculty of Agriculture.
- Participation in research activities within the Research Agreement (2009) "Study and research activities on the application of current legislation on workplace safety in the agro-forestry sector". in collaboration with the University "Mediterranea" of Reggio Calabria, Faculty of Agriculture.
- Participation in research activities within the Research Convention (2010) "Evaluation of the energy potential of the Province of Reggio Calabria, retractable from the use of forest and agricultural biomass" in collaboration with the University "Mediterranea" of Reggio Calabria, Faculty of Agriculture.

- Member for the University "Mediterranea" of Reggio Calabria, Department of Agriculture, of the research unit within the 2011 National Operational Program (PON01\_01545) "Advanced technological systems and integrated processes in the olive production chain for the enhancement of products and by-products, the development of new sectors and the creation of eco-compatible production systems - OLIO PIU "(Research and training) Scientific Responsible Prof. M. Poiana.
- Member for the University "Mediterranea" of Reggio Calabria, Department of Agriculture, of the research unit within the Rural Development Program 2007-2013 - Asse 1 "Improvement of the Agricultural and Forestry Sector Competitiveness" Misura 124 - Project "Cooperation for the creation of new products/processes in the cultivation, transformation and marketing of products and waste products from conventional, BIO and DOP Calabria figs" in ATS with the Department of Biology, Ecology and Earth Sciences (DiBEST) of the University of Calabria
- Member for the University "Mediterranea" of Reggio Calabria, Department of Agriculture, of the research unit within the Rural Development Program 2007-2013 - Asse 1 "Improvement of the Agricultural and Forestry Sector Competitiveness" Misura 124 - Project "Phytosanitary sustainability of table grapes in a protected environment "in ATS with the Department of Agricultural and Forestry Sciences of the University of Palermo
- Member for the University "Mediterranea" of Reggio Calabria, Department of Agriculture, of the Research Unit within the POR FESR CALABRIA 2007-2013 project, Asse I – Lina di Intervento 1.1.1.2 "Industrial research and experimental development projects in regional strategic sectors ". "Citrus Calabriae" project: new technologies for the enhancement of the regional citrus production chain.
- Member for the University "Mediterranea" of Reggio Calabria, Department of Agriculture, of the research unit within the PON03PE\_00090\_1 project - "Product and process innovation in the supply chain of bakery and confectionery products", funded within the High Technology Agro-industrial District of Calabria (AGRIFOODTECH) under the PON - Research and Competitiveness Program 2007-2013, by the Ministry of University and Research (MIUR) and by the Ministry of Economic Development (MISE)
- Member for the University "Mediterranea" of Reggio Calabria, Department of Agriculture, of the research unit within the PON03PE\_00090\_2 project - "Sustainable models and new technologies for the enhancement of olives and extra virgin olive oil produced in Calabria", funded within the High Technology Agro-industrial District of Calabria (AGRIFOODTECH) under the PON - Research and Competitiveness Program 2007-2013, by the Ministry of University and Research (MIUR) and by the Ministry of Economic Development (MISE)
- Member for the University "Mediterranea" of Reggio Calabria, Department of Agriculture, of the research unit within the PON03PE\_00090\_3 project - "Sustainable models and new technologies for the enhancement of Mediterranean vegetable supply chains" funded within the High Technology Agro-industrial District of Calabria (AGRIFOODTECH) under the PON - Research and Competitiveness Program 2007-2013, by the Ministry of University and Research (MIUR) and by the Ministry of Economic Development (MISE).
- Member for the University "Mediterranea" of Reggio Calabria, Department of Agriculture, of the technical support unit within the collaboration agreement governing the relations with the Aspromonte National Park Authority for the design and construction of racing bicycles made of Aspromonte wood.
- Member for the University "Mediterranea" of Reggio Calabria, Department of Agriculture, of the research unit within the "Sustainability of the Olive-oil System - S.O.S." project, funded by Progetto Ager - Agri-food and research (Network Foundation for agri-food research). Responsible for Task 3.3 "Production of biogas from milling by-products"
- Scientific responsible, as of 31-01-2018, within the agreement between the Department of Agriculture of the University "Mediterranea" of Reggio Calabria and the company ARTIBEL srl, within the POR Calabria FESR-FSE 2014-2020 project, Asse I - Promotion of research and innovation, specific objective 1.1. "Increase in business innovation activity". Action 1.1.2 "Support for the purchase of services for technological, strategic, organizational and commercial innovation of companies". Project proposal entitled "Technical improvement in the production and drying process of the Bio / Dop Dottato fig" CUP: J34E14003070005
- Member for the University "Mediterranea" of Reggio Calabria, Department of Agriculture, of the research unit within the POR Calabria FESR-FSE 2014-2020 project Asse I - Promotion of research and innovation, specific objective 1.2 - "Strengthening of the regional and national innovation system". Action 1.2.2 "Support for the implementation of complex research and development projects on limited relevant thematic areas and for the application

of technological solutions functional to the implementation of S3 strategies". Project entitled "Biocomposting of waste from the agri-food industry mediated by insects: development of an innovative process of bioconversion and enhancement"- WP3 "Development of the prototype and Validation of biocomposting of waste in the companies".

- Member for the University "Mediterranea" of Reggio Calabria, Department of Agriculture, of the research unit within the research project "Ecosustainable control of olive phytophages - Cebiol" MIPAAF- WP 5 Evaluation of machines for the distribution of phytosanitary product and optimization of phytosanitary treatments.
- Member for the University "Mediterranea" of Reggio Calabria, Department of Agriculture, of the research unit within the Research and Development project "Ecosustainable Marketplace in Calabria - MEC", in collaboration with the Department of Law, Economics and Human Sciences of the University "Mediterranea" of Reggio Calabria and the ITACA company of Rende (CS) - Ministry of Economic Development, Fund for Sustainable Growth - Sportello "Agrifood" PON I&C 2014-2020 - WP 3 Enhancement of food products that are no longer suitable to consumption for energetic purposes.
- Member for the University "Mediterranea" of Reggio Calabria, Department of Agriculture, of the research unit within the international research project "SUSTAINOLIVE - Novel approaches to promote the SUSTAINability of OLIVE groves in the Mediterranean" - WP5 "Socio-Economic and Life Cycle Assessment" funded by PRIMA Foundation (Section 1 Call 2018 - Farming Systems).
- Scientific coordinator of the research project entitled "Eccellenza Rossa" (CUP: J22C22000460005). Project funded by PSR Calabria 2014/2020 Measure 16 - Intervention 02.16.01 - Development of new products, practices, processes and technologies in the agri-food and forestry sector.
- Participation in the research project entitled "Optimization of the vibration technology for the improvement of the efficiency of the mechanical collection of fruit trees". Proyectos de I+D+i in the framework of the Operational Program FEDER Andalucía 2014-2020. Reference 1381058-R.
- Member of the Steering Committee and the Working Group of the BiodiverCity Permanent Urban Laboratory, activated within the framework agreement between the PAU Department of the Mediterranean University of Reggio Calabria and the Metropolitan Municipality of Reggio Calabria, implementing party of the intervention: "BIODIVERCITY" (CUP B47G22000090007), foreseen in the Integrated Urban Plan "Aspromonte In Città: a green, sustainable, inclusive and intelligent metropolitan city."
- Member of the working group for the University of Reggio Calabria within Spoke 3 "Enabling Technologies and Sustainable Strategies for the Intelligent Management of Agricultural Systems and their Environmental Impact" and Spoke 9 "New Technologies and Methodologies for Traceability, Quality, Safety, Measurements and Certifications to Enhance the Value and Protect the Typical Traits in Agri-food Chains" of the CN\_000022 project entitled "National Research Centre for Agricultural Technologies - AGRITECH" - CUP C33c22000260001, approved for funding with DD of MUR prot. no. 1032 of 17-06-2022.
- Member of the working group for the University of Reggio Calabria of the activity 3.1.6 within the Spoke 3 "Smart technologies for sustainable agri-food chain and forestry" of the project ECS\_000009 entitled "Technologies for climate change adaptation and quality of life improvement- Tech4You" - CUP C33C22000290006 admitted for funding with DD of the MUR prot. no. 1049 of 23-06-22
- Scientific Coordinator of the Research Unit of the Mediterranea University of Reggio Calabria within the framework of the PRIN 2022 PNRR - Research Projects of National Interest. Research project title: Implementation of a Digital Tree to Optimise Technical and Environmental Performances of Crop Protection Equipment. Project code: p2022e7s8x. In collaboration with UNICT and ICAR-CNR.

Supervisor or co-supervisor of the three-year and/or master's degree theses and master's thesis, and doctoral thesis at the University Mediterranea of Reggio Calabria

Member of PhD teachers' board in AGRICULTURAL, FOOD AND FOREST SCIENCES - SAAF at the Department of Agriculture of the Mediterranean University of Reggio Calabria

**Didactic mentor** (Rectoral Decree 187/2014) within the convention between the Commerce Chamber of Reggio Calabria and the University "Mediterranea" for the funding of **6 Post-Doc**

**scholarships** aimed at the experimentation and the development of some PhD thesis in local companies interested in investing on innovation and research.

**Hosting researcher/scientific mentor** at the Department of Agraria, University "Mediterranea" of Reggio Calabria for the scholarship "DOCTORADO HACIA LA EXCELENCIA 2015" assigned by the University of Cordoba (Spain) for study periods abroad from July 29th, 2015 to October 30th, 2015.

**Scientific coordinator** for the "Alternanza Scuola Lavoro" A.A. 2019-2020, entitled "Enhancement of agri-food by-products for energy purposes" organized by the University "Mediterranea" of Reggio Calabria, Department of Agriculture in collaboration with Liceo Scientifico G. Berto of Vibo Valentia.

He achieved the National Scientific qualification as full professor in the Italian higher education system, in the call 2021/2023 (Ministerial Decree n. 553/2021 and 589/2021) for the disciplinary field of GSD 07/AGRI-04 - Agricultural, Forestry and Biosystems Engineering, SSD AGRI-04/B - Agricultural Mechanics. The validity of the qualification is eleven years, starting from the 06/06/2023.

**Conventions and protocols of agreement:**

- Coordinator for the protocol of agreement between the Department of Agriculture of the University "Mediterranea" of Reggio Calabria and the UNIONBERG O.P. Consortium Company S.r.l., CAPUA 1880 S.r.l. and SYMRISE AG to promote activities and projects of mutual interest relating to the bergamot supply chain.
- Coordinator for the protocol of agreement between the Department of Agriculture of the University "Mediterranea" of Reggio Calabria and Olearia San Giorgio to promote activities and projects of mutual interest relating to the olive oil supply chain.
- Coordinator for the protocol of agreement between the Department of Agriculture of the University "Mediterranea" of Reggio Calabria and Azienda Agricola F.Ili Fazari to promote activities and projects of mutual interest relating to the olive oil supply chain.
- Coordinator for the protocol of agreement between the Department of Agriculture of the University "Mediterranea" of Reggio Calabria and Sicur Control System srl (CS) to promote activities and projects of mutual interest relating to smart agriculture.
- Coordinator for the protocol of agreement between the Department of Agriculture of the University "Mediterranea" of Reggio Calabria and the DSM ITALIA company - Construction of Sprayers, to promote activities and projects of mutual interest relating to machines for the distribution of phytopharmaceuticals.
- Coordinator for the protocol of agreement between the Department of Agriculture of the University "Mediterranea" of Reggio Calabria and the Provincial Association of Chefs (Reggio Calabria) to promote activities and projects of mutual interest relating to the sector of protection and enhancement of high-quality gastronomic products, with specific reference to pizza.
- Coordinator for the protocol of agreement between the Department of Agriculture of the University "Mediterranea" of Reggio Calabria and the Metropolitan City of Reggio Calabria to promote the dissemination of knowledge in the agricultural, forestry and mycological sectors.
- Coordinator for the international framework agreement between the Department of Agriculture of the University "Mediterranea" of Reggio Calabria and the Ecole Nationale Supérieure Agronomique, El Harrach (Algeria) to promote activities and projects of mutual interest.
- Coordinator for an international framework agreement between the Department of Agriculture of the University "Mediterranea" of Reggio Calabria and the Agro-Food Industries Alliance (AGFA), EGYPT to promote activities and projects of mutual interest.
- Coordinator for an international framework agreement between the University "Mediterranea" of Reggio Calabria and The Arab Academy for Science, Technology and Maritime Transport (Egypt), EGYPT to promote activities and projects of mutual interest.
- Coordinator for the protocol of agreement between the Department of Agriculture of the University "Mediterranea" of Reggio Calabria and the Serre Regional Natural Park, ARSAC, GAL Terre Vibonesi, GAL Serre Calabresi, GAL Terre Locridee, for the establishment of a committee promoting the "Parco delle Serre and adjoining territories" Bio-District.

**Winner** of the PRIMOLIO 2016 award, given by the PrimOlio Association - Saperi e Sapori di Calabria;

**Promoting Committee** "IGP Olio di Calabria" – Scientific Collaboration in the drafting of the

specification of the "Olio di Calabria" IGP published in the Official Gazette 284 of 06 December 2014;

Calabria Region - Department 6 Agriculture, Forestry and Afforestation - Scientific Collaboration in the drafting of Regional Law 30 October 2012, n. 48 "Protection and enhancement of the olive-growing heritage of the Calabria Region";

Calabria Region – Department 6 Agriculture Forestry and Afforestation – **Member of the editorial board** of the departmental magazine "CALABRIA RURALE". Registration n .7 of 22/10/2013 at Catanzaro Tribunal. Printed by PierreStampa srl e distributed by in attachment to Agrisole Gruppo il Sole 24 Ore

Member of the University, Research and Training Commission set up by the Council of the Order of Agronomists and Foresters of the Province of Reggio Calabria (June 2023- September 2025)

**Editorial Board Member** of the Journal "Information Processing in Agriculture" (Elsevier)  
**Editorial Board Member** of the journal 'Agriculture' (MDPI) 'Agricultural Technology' section

**Referee for the following magazines and journals:**

Scientia Horticulturae (Elsevier journal)  
Computers and Electronics in Agriculture (Elsevier journal)  
Information Processing in Agriculture (Elsevier journal)  
Bioresource Technology (Elsevier journal)  
Environmental Challenges (Elsevier journal)  
Journal of the Saudi Society of Agricultural Sciences (Elsevier journal)  
Agriculture, AgriEngineering, Materials, Sustainability, Forests, Applied Sciences, Energies, International Journal of Environmental Research and Public Health (MDPI)  
Chemical Engineering Transactions  
Journal of Food Processing and Preservation (Wiley)  
Journal of Agricultural Engineering (JAE)  
Advances in Environmental and Engineering Research (LIDSEN Publishing Inc.)  
Croatian Journal of Forest Engineering

**Guest Editor** of the Special Issue "Mechanization, Wood Production and Environmental Sustainability in Forest Operations" for the journal Forests (MPDI)

Scientific Publication  
issued in National and International  
Reviews

- 1) Zimbalatti G., Bernardi B., Morabito S., Analysis of thinning operations in Corsican pine artificial high forests in Calabria (Italy). J. of Ag. Eng., Rivista di Ingegneria Agraria (2008), 39, 37-43.
- 2) Bernardi B., Giametta F., Sciarrone G., Innovations in mechanization and control systems of productions in olive sector. Agricultural Engineering International: the CIGR Ejournal. Manuscript MES 08 003. Vol. X. June, 2008.
- 3) Giametta G., Bernardi B., Scavallatrici: l'efficienza dipende dall'allevamento. Olivo e Olio, ed. Edagricole, n. 11-12 (2008), 54-57.
- 4) Giametta G., Bernardi B., Mechanical harvesting in super intensive olive growing. "International Conference on Innovation in Food Processing Technology and Engineering", Bangkok (Thailand), 19-20 January 2009.
- 5) Giametta G., Zimbalatti G., Bernardi B., Meccanizzazione del taglio preferibile al non intervento. Olivo e Olio, ed. Edagricole, n. 2 (2009), 48-51.
- 6) Giametta G., Bernardi B., Le macchine scavallatrici per la raccolta delle olive. Mondo Macchina, n. 1 (2009), 68-74.
- 7) Giametta G., Zimbalatti G., Bernardi B., Comparative tests on manual and mechanical pruning in spanish super intensive olive cultivation system. XXXIII CIOSTA - CIGR V Conference 2009,

"Technology and management to ensure sustainable agriculture, agro-systems, forestry and safety". Reggio Calabria 17-19 Giugno 2009, Vol. 2, 1271-1275.

- 8) Zimbalatti G., Bernardi B., Morabito S., The management of conifer reforestation in Calabria (Italy): thinning operations in Corsican pine artificial high forests. Workshop IUFRO (Unit 3.06.00) Forestry utilization in Mediterranean countries with particularly respect to sloping areas. XXXIII CIOSTA - CIGR V Conference 2009, "Technology and management to ensure sustainable agriculture, agro-systems, forestry and safety" Reggio Calabria 17-19 Giugno 2009, Vol. 3, 2341-2345.
- 9) Giametta G., Bernardi B., Mechanization in sloping areas. "2nd World Congress of Agroforestry", Nairobi (Kenya), 23-28 August 2009.
- 10) Giametta G., Bernardi B., Mechanized harvesting tests performed by grape harvesters in super intensive olive orchard cultivation in Spain. J. of Ag. Eng., Rivista di Ingegneria Agraria (2009), 40, 19-26.
- 11) Giametta G., Zimbalatti G., Bernardi B., La meccanizzazione delle operazioni di potatura in impianti olivicoli superintensivi spagnoli. "IX convegno nazionale AlIA - Ricerca e innovazione nell'ingegneria dei biosistemi agro-territoriali". Ischia Porto (NA), 12-16 Settembre 2009, memoria n. 7-59.
- 12) Zimbalatti G., Bernardi B., Manual and mechanical pruning tests in the super intensive olive growing. Olivebioteq 2009, Third International Seminar "For a renovated profitable and competitive Mediterranean olive growing sector". 15-19 December 2009, Sfax, Tunisia, pp.165-168.
- 13) Zimbalatti G., Bernardi B., Morabito S., Using a self-propelled radio-controlled shaker: mechanized harvesting tests and economic evaluation. Olivebioteq 2009, Third International Seminar "For a renovated profitable and competitive Mediterranean olive growing sector". 15-19 December 2009, Sfax, Tunisia
- 14) Giametta G., Bernardi B., Olive grove equipment technology. Straddling trees: mechanized olive harvests. Advances in Horticultural Science (2010), 24 (1): 64-70.
- 15) Zimbalatti G., De Luca A. I., Bernardi B., Mechanical pruning tests and economic analysis in spanish intensive olive growing systems. International Conference Ragusa SHWA2010 "Work safety and risk prevention in agro-food and forest systems". September 16-18, 2010 Ragusa, Italy, 677-682
- 16) Giametta G., Bernardi B. In Calabria la meccanizzazione richiede prima il rinnovamento. Olivo e Olio, ed. Edagricole n. 10 (2010), 40-42.
- 17) G. Zimbalatti, S. Benalia, A.R. Proto, B. Bernardi. Operational working time assessment of an innovative system for pesticide distribution in greenhouse. XXXIV CIOSTA - CIGR V Conference 2011, "Efficient and safe production processes in sustainable agriculture and forestry". Vienna (Austria) 29 June -1 July 2011
- 18) Proto A. R., Abenavoli L.M.M., Bernardi B., Zimbalatti G., Benalia S., Smorto D. Olive oil mills acoustic levels during a continuous processing. XXXIV CIOSTA - CIGR V Conference 2011, "Efficient and safe production processes in sustainable agriculture and forestry". Vienna (Austria) 29 June -1 July 2011
- 119) Abenavoli L. M. M., Proto A.R., Bernardi B., Smorto D. Le macchine nell'azienda agraria. La collana del contadino imprenditore-Manuali informativi per gli operatori agricoli e forestali. Volume 4. Iriti Editore, 2011.
- 20) Proto A.R., Barreca P., Benalia S., Bernardi B., Zimbalatti G. Environmental management systems in sawmills in Calabria. International Conference RAGUSA SHWA 2012 September 3-5, 2012 Ragusa - Italy "Safety Health and Welfare in Agro-food Agricultural and Forest Systems", 511-516.
- 21) Zimbalatti G., Benalia S., Bernardi B., Proto A. R., Smorto D. Hazelnuts mechanical harvesting in Calabria: preliminary trials on work productivity. International Conference RAGUSA SHWA 2012 September 3-5, 2012 Ragusa - Italy "Safety Health and Welfare in Agro-food Agricultural and Forest Systems", 104-109.

22) Proto A.R., Bernardi B. Evaluation of the Soil Compaction Caused by Passages of Forwarder. FORMEC 2012 Forest Engineering- Concern, Knowledge and Accountability in Today's Environment, October 8-12, 2012, Dubrovnik (Cavtat).

23) Zimbalatti G., Bernardi B. (2013). La raccolta in olivicoltura richiede maggiore innovazione tecnologica. *La Rivista di Scienza dell'Alimentazione. Journal of Food Science and Nutrition*. FOSAN, Fondazione per lo Studio degli Alimenti e della Nutrizione, N. 1, gennaio-marzo 2013 (Anno 42), ISSN 1128-7969, 105–110.

24) Proto A.R., Bernardi B., Zimbalatti G., Macrì G. (2013). Productivity and cost analysis of a John Deere skidder in South Italy. *Atti del III FORTECHENVI* (Forest and Forest Products Technology and the Environment), Brno, ISBN: 978 -80-02-02467-5.

25) B. Bernardi, G. Zimbalatti, S. Benalia, A.R. Proto, P. Callea. Mechanical Harvesting Trials on New Intensive Olive Orchards: Comparison Between a Self-Propelled Trunk Shaker and Nets, and a Shaker With Wrap-Around Catching Frame. International Commission of Agricultural and Biological Engineers, Section V. CIOSTA XXXV Conference "From Effective to Intelligent Agriculture and Forestry", Billund, Denmark, 3-5 July 2013.

26) P. Callea, G. Zimbalatti, E. Quendler, A. Nimmerichter, N. Bachl, B. Bernardi, D. Smorto, S. Benalia. Monitoring of Physical Strain and Systematic Postures in Apple Harvesting. International Commission of Agricultural and Biological Engineers, Section V. CIOSTA XXXV Conference "From Effective to Intelligent Agriculture and Forestry", Billund, Denmark, 3-5 July 2013.

27) Giometta G., Bernardi B. Automazione e qualità. *La Calabria scommette. Olivo e Olio*, ed. Edagricole n. 9 (2013), 58-60.

28) Callea P., Zimbalatti G., Quendler E., Nimmerichter A., Bachl N., Bernardi B., Benalia S., Proto A.R.. Occupational illness due to physiological strains and ergonomic problems in manual sugar beet harvesting. *Journal of Agricultural Engineering* 2013; XLIV(s1), pg. 66. 10th AIA Conference: "AIA13 – Horizons in agricultural, forestry and biosystems engineering". Viterbo, University of Tuscia, Italy, September 8-12, (2013) .

29) B. Bernardi, G. Zimbalatti, A.R. Proto, S. Benalia, A. Fazari, P. Callea, 2013. Mechanical grading in PGI Tropea red onion post harvest operations. *Journal of Agricultural Engineering* 2013; XLIV(s2):e63, 317-322. doi:10.4081/jae.2013.305. 10th AIA Conference: "AIA13 – Horizons in agricultural, forestry and biosystems engineering". Viterbo, University of Tuscia, Italy, September 8-12, (2013)

30) Andrea R. Proto, Bruno Bernardi , Dario Smorto. La produzione energetica da fonti rinnovabili in Italia e in Calabria. Nel volume: *Valorizzazione energetica delle risorse forestali e agricole in provincia di Reggio Calabria*. Abramo Editore, 2013, 9-34.

31) Andrea R. Proto, Bruno Bernardi, Lorenzo M.M. Abenavoli. I processi di valorizzazione delle biomasse di origine agro-forestale. Nel volume: *Valorizzazione energetica delle risorse forestali e agricole in provincia di Reggio Calabria*. Abramo Editore, 2013, 139-166.

32) S. Benalia, G. Zimbalatti, S. Cubero, J. M. Prats-Montalban, B. Bernardi, S. Alegre, J. Chanona-Perez, J. Blasco (2014). Automatic sorting of dried figs based on computer vision system. In "VII Congreso Ibérico de Agroingeniería y Ciencias Hortícolas: Innovar y Producir para el Futuro" (F. G. UPM, ed.), pp. 1763-1768, Madrid. ISBN: 84-695-9055-3

33) Callea P., Zimbalatti G., Quendler E., Nimmerichter A., Bachl N., Bernardi B., Smorto D., Benalia S. Occupational illnesses related to physical strains in apple harvesting. *Annals of Agricultural and Environmental Medicine*. 2014; 21(2): 407–411. doi: 10.5604/1232-1966.1108614

34) Proto A. R., Zimbalatti G., Abenavoli L., Bernardi B., Benalia S. (2014). Biomass Production in Agroforestry Systems: V.E.Ri.For Project. *Advanced Engineering Forum* Vol. 11 (2014) pp 58-63 (2014) Trans Tech Publications, Switzerland - doi:10.4028/www.scientific.net/AEF.11.58

35) Perri E., Benalia S., Benincasa C., Bernardi B., Parise A., Pellegrino M., Romano E., Tamburino V., Urso E., Zappia G., Zema D.A. (2014). Ottimizzazione della digestione anaerobica di sottoprodoti dell'olivo. In: III Convegno nazionale dell'olivo e dell'olio. ACTA ITALUS HORTUS, ISBN: 978-88-940276-1-7, Bari, 26-28 novembre.

36) Bernardi B., Benalia S., Zimbalatti G., Stillitano T., Strano A. (2014). Maggiore competitività per l'olivicoltura tradizionale in Calabria. In: III Convegno nazionale dell'olivo e dell'olio. ACTA ITALUS HORTUS, vol. 14, ISBN: 978-88-940276-1-7, Bari, 26-28 novembre

37) Proto A.R., Zimbalatti G., Bernardi B. (2014). Nuovi strumenti al servizio delle utilizzazioni forestali - New tools at the service of forest utilization. "Il Congresso Internazionale di Selvicoltura Progettare il futuro per il settore forestale. II International Congress of Silviculture Designing the future of the forestry sector", pp.463-468. Firenze, 26-29 Novembre. <http://dx.doi.org/10.4129/2cis-arp-nuo>

38) Benalia S., Bernardi B., Cubero S., Leuzzi A., Larizza M., Blasco J. (2015), Preliminary trials on hyperspectral imaging implementation to detect mycotoxins in dried figs, Chemical Engineering Transactions, 44, 157-162 DOI: 10.3303/CET1544027

39) A. R. Proto, G. Zimbalatti, G. Macrì, B. Bernardi (2015), Acoustic tools in forestry: a case study in Italy. Environmentally Friendly Agriculture and Forestry for Future Generations: International Scientific XXXVI CIOSTA & CIGR SECTION V Conference, 26-28 May, 2015, Saint Petersburg, Russia: SPbSAU, pp. 690-696, ISBN 978-5-85983-257-6

40) Bernardi B, Benalia S, Proto A.R., Abenavoli L.M.M., Zimbalatti G. Recovery of olive mill wastewater for energetic purposes: a medium scale prototype for anaerobic co-digestion processes study. In AIA 2015 International Mid-Term Conference Italian Society of Agricultural Engineering "New Frontiers of Biosystems and Agricultural Engineering for Feeding the Planet." Naples, Italy, June 22-23, 2015

41) Proto AR, Panuccio MR, Bernardi B, Benalia S. Potential of *Jatropha curcas* L. on marginal lands of Southern Italy. In AIA 2015 International Mid-Term Conference Italian Society of Agricultural Engineering "New Frontiers of Biosystems and Agricultural Engineering for Feeding the Planet." Naples, Italy, June 22-23, 2015

42) Benalia, S., Cubero, S., Prats-montalbán, J. M., Bernardi, B., Zimbalatti, G., Blasco, J. (2016). Computer vision for automatic quality inspection of dried figs (*Ficus carica* L.) in real-time. Computers and Electronics in Agriculture, 120, 17–25. doi:10.1016/j.compag.2015.11.002

43) Souraya Benalia, Bruno Bernardi, Giuseppe Zimbalatti, José Blasco (2016). Applicazione dei sistemi di visione artificiale all'industria olearia/ Computer vision system employment in olive and olive oil industries. Convegno Internazionale "Oro extravergine di oliva" , 21 Marzo 2016 Polistena (RC)

44) Bruno Bernardi, Sergio Castro-García, Gregorio L. Blanco Roldan, Souraya Benalia, Antonio Fazari, Giuseppe Zimbalatti (2016). Studio delle vibrazioni trasmesse alle piante di olivo dai sistemi di raccolta meccanica/olive trees vibration response to mechanical harvesting. Convegno Internazionale "Oro extravergine di oliva" , 21 Marzo 2016 Polistena (RC)

45) Bernardi, B., Benalia, S., Fazari, A., Zimbalatti, G., Stillitano, T., & De Luca, A. I. (2016). Mechanical harvesting in traditional olive orchards: oli-picker case study. Agronomy Research, 14(3), 683–688.

46) Fellin, M., Negri, M., Macrì, G., Bernardi, B., Benalia, S., Zimbalatti, G., and Proto, A.R. (2016). Electricity from wood : a wood quality and energy efficiency approach to small scale pyro-gasification. In Procedia - Social and Behavioral Sciences (223). 2nd International Symposium "new metropolitan perspectives" - Strategic Planning, Spatial Planning, Economic Programs and Decision Support Tools, through the Implementation of Horizon/Europe2020. ISTH2, pp. 783–790.

47) Zimbalatti G., Bernardi B., Castro-Garcia S. (2017). Oliveti tradizionali, oltre gli scuotitori. Olivo e Olio, ed. Edagricole n. 3, 52-55.

48) Bernardi B., Benalia S., Abenavoli L., Franco G., Fazari A., Zimbalatti G. (2017). Worker's energy consumption during weed management. In proceeding 11th International AIA Conference:

"Biosystems Engineering addressing the human challenges of the 21st century" . July 5-8, 2017 Bari - Italy. ISBN 978-88-6629-020-9

49) Bernardi, B., Benalia, S., Panuccio, M.R. and Zimbalatti, G. 2017. Assessing the "Special-Serre" sprayer for pesticide application to a greenhouse chrysanthemum crop. *Acta Hort. (ISHS)* 1170:603-610 [http://www.actahort.org/books/1170/1170\\_75.htm](http://www.actahort.org/books/1170/1170_75.htm)

50) Benalia S., Bernardi B., Blasco J., Fazari A., Zimbalatti G. (2017). Assessment of the Ripening of Olives Using Computer Vision. *CHEMICAL ENGINEERING TRANSACTIONS*, vol. 58, p. 355-360, doi: 10.3303/CET1758060

51) Bernardi B., Benalia S., Zema D.A., Tamburino V., Zimbalatti G. (2017). An automated medium scale prototype for anaerobic co-digestion of olive mill wastewater. *Information Processing in Agriculture*, 4, 316-320, <http://dx.doi.org/10.1016/j.inpa.2017.06.004>.

52) Bernardi B., Quendler E., Benalia S., Mantella A., Zimbalatti G. (2018). Occupational risks related to vibrations using a brush cutter for green area management. *Annals of Agricultural and Environmental Medicine*. Vol 25, No 2, 255–258. doi: 10.26444/aaem/75684.

53) Bernardi B., Tous J., Benalia S., Abenavoli L.M., Zimbalatti G., Stillitano T., De Luca A.I. (2017). The assessment of hazelnut mechanical harvesting productivity. *Agronomy Research* 15(4), 1491-1497, <https://doi.org/10.15159/AR.17.042>

54) Zimbalatti G., Castro-Garcia S., Bernardi B. (2017). La raccolta meccanica, fra tradizione e innovazione. *Mondo Macchina/Machinery World* n.10 pg 36-40.

55) Bernardi B., Benalia S., Praticò E., Zimbalatti G. (2017). Applicazione dei sistemi di visione artificiale per la valutazione delle proprietà esterne delle olive. IV Convegno Nazionale dell'Olivo e dell'Olio 18 – 20 ottobre 2017 Pisa

56) Bernardi, B., Castro-García, S., Blanco-Roldán, G.L., Benalia, S., Fazari, A. and Zimbalatti, G. (2018). A comparison between two materials for head-clamping pads of olive tree shakers: first trials. *Acta Horticulture*, 1199, 403-408. DOI: 10.17660/ActaHortic.2018.1199.64

57) Bernardi, B., Falcone, G., Stillitano, T., Benalia, S., Strano, A., Bacenetti, J., De Luca, A.I. (2018). Harvesting system sustainability in Mediterranean olive cultivation. *Science of the Total Environment*, 625, pp. 1446-1458. DOI: 10.1016/j.scitotenv.2018.01.005

58) Sola-Guirado, R. R., Bernardi, B., Castro-García, S., Blanco-Roldán, G. L., Benalia, S., Fazari, A., Brescia, A., & Zimbalatti, G. (2018). Assessment of aerial and underground vibration transmission in mechanically trunk shaken olive trees. *Journal of Agricultural Engineering*, 49(3), 191-197. <https://doi.org/10.4081/jae.2018.788>

59) Zema DA, Zappia G, Benalia S, Zimbalatti G, Perri E, Urso E, Tamburino V, Bernardi B (2018). Limiting factors for anaerobic digestion of olive mill wastewater blends under mesophilic and thermophilic conditions. *Journal of Agricultural Engineering*, volume XLIX:792, pp. 130.137. DOI: 10.4081/jae.2018.792

60) B. Bernardi, S. Benalia, S. Cubero, J. Blasco, J.M. Prats-Montalbán, A. Morabito, G. Zimbalatti (2018). Impiego dei sistemi di visione artificiale nel post raccolta dei prodotti di qualità. Atti del Convegno "La meccanica agraria oggi", Libera Università di Bolzano e NOI-Techpark. Bolzano, 23-24 novembre 2017. Edizioni Cleup. DOI: 10.23737/meccanica\_agraria\_oggi.html

61) Bernardi B., Benalia S. (2018). Biogas, opportunità per il settore oleario. *Olivo e Olio*, ed. Edagricole n. 5, 46-49.

62) Fazari A., Zimbalatti G., Bernardi B., Blasco J., Cubero S. (2018). Impiego dei sistemi di visione artificiale per la valutazione qualitative delle olive. 1° Workshop sull'innovazione nella meccanica e nell'impiantistica applicate ai biosistemi agro-alimentari. Aula Magna DISTAL - Bologna - 5/6 Novembre .

63) Bernardi B., Falcone G., Stillitano T., Benalia S., Strano A., Bacenetti J., De Luca A.I., Zimbalatti G. (2019). Raccolta meccanizzata: analisi di sostenibilità. *Olivo e Olio*, ed. Edagricole n. 1, 36-40.

64) Benalia S., Violi L., Barreca P., Zimbalatti G., Bernardi B. (2019). The assessment of plant protection equipment in Calabrian citrus orchards, CIOSTA & CIGR V International Conference. Rhodes, Greece, June 24-26.

65) Proto, A.R., Benalia, S., Papandrea, S., Bernardi, B., Bonfiglio, R., Leuzzi, A., Zimbalatti, G., Tonolo, A., Pari, L., Gallucci, F. (2019). Harvesting citrus and olive pruning residues for energy use in southern Italy. European Biomass Conference and Exhibition Proceedings. 27th European Biomass Conference and Exhibition, EUBCE 2019; Lisbon; Portugal; 27-30 May 2019 pp. 393-396.

66) Munera S., Aleixos N., Amigo J.M., Fazari A., Cubero S., Talens P., Bernardi B., Blasco J. Use of hyperspectral reflectance and transmittance imaging for ripeness monitoring of nectarines (2019). Model-IT, 6th International Symposium on Modelling in Horticultural Supply Chain. Molfetta, Italy 9-12 June.

67) Fazari A., Cubero S., Palou L., Taberner V., Munera S., Gómez-Sanchís J., González-González G., Benalia S., Zimbalatti G., Bernardi B., Blasco J. Detection of anthracnose in olives using vis-nir hyperspectral imaging (2019). Model-IT, 6th International Symposium on Modelling in Horticultural Supply Chain. Molfetta, Italy 9-12 June.

68) Benalia S., Papandrea S., Bernardi B., Zimbalatti G., Leuzzi A., Bonfiglio R., Gallucci F., Tonolo A., Pari L., Proto A.R. (2019). The evaluation of technical performances of orchard-pruning residue harvester in Calabria. Biosystem Engineering for sustainable agriculture, forestry and food production, International Mid-Term Conference Italian Association of Agricultural Engineering (AIIA). Matera, 12-13 September

69) Benalia S., Bernardi B., Messina G., Barreca P., Zimbalatti G. (2019). RGB imaging for the evaluation of bakery product features. Biosystem Engineering for sustainable agriculture, forestry and food production, International Mid-Term Conference Italian Association of Agricultural Engineering (AIIA). Matera, 12-13 September

70) Souraya Benalia, Salvatore F. Papandrea, Bruno Bernardi, Giuseppe Zimbalatti, Andrea R. Proto. Studio dei cantieri meccanizzati per la raccolta delle buiomasse lignocellulosiche (2019). In *Le filiere AgroEnergetiche nel Sud Italia: Il Progetto FAESI – Calabria*. pp 50-63 ISBN:978-88-904039-0-3

71) Benalia S., Bernardi B., Fazari A., Zimbalatti G. (2019) The evaluation of the external features of Calabrian olive cultivars using computer vision systems. International Conference on Food, Nutrition Security and Sustainable Agriculture (FNSSA) 1-3 December. Cairo (Egypt)

72) Bernardi, B., Abenavoli, L.M., Franco, G., Fazari, A., Zimbalatti, G., Benalia, S. Worker's metabolic rate assessment during weeding (2020) *Quality - Access to Success*, 21 (174), pp. 139-141.

73) Sola-Guirado, R.R., Bayano-Tejero, S., Aragón-Rodríguez, F., Bernardi, B., Benalia, S., Castro-García, S. (2020). A smart system for the automatic evaluation of green olives visual quality in the field. *Computers and Electronics in Agriculture*, 179, art. 105858. DOI: 10.1016/j.compag.2020.105858

74) Bernardi, B., Falcone, G., Stillitano, T., Benalia, S., Bacenetti, J., De Luca, A.I. (2021). Harvesting system sustainability in Mediterranean olive cultivation: Other principal cultivar. *Science of the Total Environment*, 766, 142508. DOI: 10.1016/j.scitotenv.2020.142508.

75) Souraya Benalia, Bruno Bernardi, Giuseppe Zimbalatti. Macchine irroratrici, efficienza e sostenibilità (2020). "Olivo & olio", n. 6, pp. 34-38, ISSN: 1127-0713. 1

76) Gucci R., Adamo P., Baldoni L., Benalia S., Bernardi B., Falsone G., Germinara G., Petacchi R., Priori S., Proietti P., Regni L., Schena L., Servili M., Vignozzi N., Zimbalatti G. (2020). Intensificazione sostenibile per la filiera olivicolo-olearia: approfondimenti sulle filiere di interesse per l'ambiente mediterraneo. I Quaderni di AISSA. Atti del XVII Convegno AISSA "Buone pratiche di intensificazione sostenibile - Strumento per lo sviluppo del sistema agroalimentare italiano" Reggio Calabria 17-18/02/2020, Volume I, ISBN: 978-88-945925-0-4

77) Benalia S., Zimbalatti G., Neri A., Bernardi B. (2021). Testing the biochemical methane potential (BMP) of olive mill wastes. 5th CIGR International Conference. Integrating agriculture and society through engineering. Maggio 11- 14, 2021, Quebec, Canada, Virtual.

78) Benalia, S.; Falcone, G.; Stillitano, T.; De Luca, A.I.; Strano, A.; Gulisano, G.; Zimbalatti, G.; Bernardi, B. Increasing the Content of Olive Mill Wastewater in Biogas Reactors for a Sustainable Recovery: Methane Productivity and Life Cycle Analyses of the Process. *Foods* 2021, 10, 1029. <https://doi.org/10.3390/foods10051029>

79) Benalia S., Zimbalatti G., Neri A., Bernardi B. (2021). Anaerobic digestion of olive mill wastewater for a sustainable recovery. XXXIX CIOSTA & CIGR V International Conference. Agricultural Systems Management in Times of Globalization. Kraków, Poland, 28 Giugno, Virtual

80) Bernardi B., Sbaglia M., Morano C., Benalia S., Sorgonà A., Zimbalatti G., Abenavoli L. (2021). Improvement of mechanical separation of black soldier fly compost: Plant design and development. XXXIX CIOSTA & CIGR V International Conference. Agricultural Systems Management in Times of Globalization. Kraków, Poland, 28 Giugno, Virtual

81) Benalia S., Abenavoli L.M., Zimbalatti G., Bernardi B (2021). Evaluation of employed equipment for plant protection product application in olive orchards. The VI International Conference on Safety, Health and Welfare in Agriculture and Agro - food Systems, Ragusa.

82) Fazari, A., Pellicer-Valero, O.J., Gómez-Sanchis, J., Bernardi, B., Cubero, S., Benalia, S., Zimbalatti, G., Blasco, J. (2021) Application of deep convolutional neural networks for the detection of anthracnose in olives using VIS/NIR hyperspectral images. *Computers and Electronics in Agriculture*, 187, art. no. 106252. DOI: 10.1016/j.compag.2021.106252

83) Fazari, A., Pellicer-Valero, O.J., Gómez-Sanchis, J., Bernardi, B., Cubero, S., Benalia, S., Zimbalatti, G., Blasco, J. (2021). Riconoscere la lebbra con l'intelligenza artificiale. *Olivo e Olio*, ed. Edagricole n. 6, 38-41.

84) Benalia S., Violì L., Barreca P., Zimbalatti G., Bernardi B. (2022) Analysis of Spray Behavior Using Different Sprayers in Citrus Groves. In: Biocca M., Cavallo E., Cecchini M., Failla S., Romano E. (eds) Safety, Health and Welfare in Agriculture and Agro-food Systems. SHWA 2020. Lecture Notes in Civil Engineering, vol 252. Springer, Cham. [https://doi.org/10.1007/978-3-030-98092-4\\_41](https://doi.org/10.1007/978-3-030-98092-4_41)

85) Bernardi B., Macrì G., Falcone G., Stillitano T., Benalia S., De Luca A.I. Assessment and Sustainability of Logging Operations in Calabrian Pine High Forests. *Forests*. 2022; 13(3):403. <https://doi.org/10.3390/f13030403>

86) Anello M., Bernardi B., Benalia S., Giuffrè A.M., Zimbalatti G., Iazzolino M., Blasco J., Gómez-Sanchis J. A smart approach to evaluate bergamot essential oil content in the field. *Frutic 2022 14th International Symposium, Valencia (ES), 29th June - 01st July.*

87) Papandrea S.F., Cataldo M.F., Bernardi B., Zimbalatti G., Proto A.R. The Predictive Accuracy of Modulus of Elasticity (MOE) in the Wood of Standing Trees and Logs. 2022; *Forests*, 13 (8), art. no. 1273 <https://DOI: 10.3390/f13081273>

88) Bernardi, B.; Macrì, G.; Falcone, G. Productivity and Life Cycle Assessment (LCA) of Tree Felling by Chainsaw in Thinning of Calabrian Pine Stands. *Environ. Sci. Proc.* 2022, 22, 10. <https://doi.org/10.3390/IECF2022-13039>

89) Falcone G, Stillitano T, Iofrida N, Spada E, Bernardi B, Gulisano G and De Luca AI (2022) Life cycle and circularity metrics to measure the sustainability of closed-loop agri-food pathways. *Frontiers in Sustainable Food Systems* 6:1014228. doi: 10.3389/fsufs.2022.1014228

90) Benalia S., Calogero V., Anello M., Zimbalatti G., Bernardi B., (2023) Application of computer vision systems for assessing bergamot fruit external features. *Adv. Hort. Sci.*, 37(1): 111-116. <https://doi.org/10.36253/ahsc13911>

91) Scarcello, L., Benalia, S., Zimbalatti, G., Fazari, A., Bernardi, B. (2023). A Smart Automation System for the Management and Control of a Medium Scale Digester Plant. In: Ferro, V., Giordano, G., Orlando, S., Vallone, M., Cascone, G., Porto, S.M.C. (eds) AIIA 2022: Biosystems Engineering Towards the Green Deal. AIIA 2022. Lecture Notes in Civil Engineering, vol 337. Springer, Cham. [https://doi.org/10.1007/978-3-031-30329-6\\_94](https://doi.org/10.1007/978-3-031-30329-6_94)

92) Benalia, S., Zimbalatti, G., Abenavoli, L.M.M., Fazari, A., Bernardi, B. (2023). Analysis of Spraying Equipment Performances in Olive Orchards. In: Ferro, V., Giordano, G., Orlando, S., Vallone, M., Cascone, G., Porto, S.M.C. (eds) AIIA 2022: Biosystems Engineering Towards the Green Deal. AIIA 2022. Lecture Notes in Civil Engineering, vol 337. Springer, Cham. [https://doi.org/10.1007/978-3-031-30329-6\\_32](https://doi.org/10.1007/978-3-031-30329-6_32)

93) Bernardi B, Franco G, Messina G, Fazari A, Benalia S, Zimbalatti G, Abenavoli LMM. Metabolic Energy Consumption during Green Area Management. *Applied Sciences*. 2023; 13(17):9671. <https://doi.org/10.3390/app13179671>

94) Neri A, Bernardi B, Zimbalatti G, Benalia S. An Overview of Anaerobic Digestion of Agricultural By-Products and Food Waste for Biomethane Production. *Energies*. 2023; 16(19):6851. <https://doi.org/10.3390/en16196851>

95) Neri A, Benalia S., Zimbalatti G., Gabauer W., Mihajlovic I., Ghassemi K., Poschmaier-Kamarad L., Bernardi B. (2023) Recovery of Agrifood By-Products and Food Waste for Biomethane Production. 31st European Biomass Conference and Exhibition, 5-8 June, Bologna, Italy, 756-760. <https://doi.org/10.5071/31stEUBCE2023-4CV.10.6>

96) Bernardi B., Sola-Guirado R.R., Bayano-Tejero S., Forestiero A. (2023) Tecnologie Smart ed AI per la selezione in campo. Olivo e Olio, ed. Edagricole n. 6, 29-33

97) Neri A., Hummel F., Benalia S., Zimbalatti G., Gabauer W., Mihajlovic I., Bernardi B. Use of Continuous Stirred Tank Reactors for Anaerobic Co-Digestion of Dairy and Meat Industry By-Products for Biogas Production. *Sustainability*. 2024; 16(11):4346. <https://doi.org/10.3390/su16114346>

98) Malyshov D., Filice L., Mirabelli G., Longo F., Bernardi B., Carbone G., Rybak L. (2024). A Literature Review and Design Considerations Towards a Gripper for Tomato Harvesting. In: Pisla, D., Carbone, G., Condurache, D., Vaida, C. (eds) Advances in Service and Industrial Robotics. RAAD 2024. Mechanisms and Machine Science, vol 157. Springer, Cham. [https://doi.org/10.1007/978-3-031-59257-7\\_55](https://doi.org/10.1007/978-3-031-59257-7_55)

99) Sbaglia M., Abenavoli L.M., Bernardi B., 2024. Developing a Plant for Processing PGI 'Cipolla Rossa di Tropea Calabria' Spring Onions Using Compressed Air. AgEng2024 Conference "Agricultural Engineering challenges in existing and new agroecosystems" 1-4 July 2024 Agricultural University of Athens, Greece

100) Anello M., Mateo F., Bernardi B., Giuffrè A.M., Blasco J., Gómez-Sanchis J. Convolutional neural networks to assess bergamot essential oil content in the field from smartphone images. *Industrial Crops and Products*, Volume 220, 2024, 119233, ISSN 0926-6690, <https://doi.org/10.1016/j.indcrop.2024.119233>.

101) Anello M., Mateo F., Bernardi B., Benalia, S., Zimbalatti G., Blasco J., Gómez-Sanchis J. (2024). Is It Possible to Do a Reliable Assessment of Bergamot Colour in the Field with a Smartphone Camera?. In: Berruto, R., Biocca, M., Cavallo, E., Cecchini, M., Failla, S., Romano, E. (eds) Safety, Health and Welfare in Agriculture and Agro-Food Systems. SHWA 2023. Lecture Notes in Civil Engineering, vol 521. Springer, Cham. [https://doi.org/10.1007/978-3-031-63504-5\\_27](https://doi.org/10.1007/978-3-031-63504-5_27)