

Profile will be available until 25 December 2023



Date of birth:

Gender:

Nationality:

WORK EXPERIENCE

Research fellow

CNR-IBE National Research Council - Institute of BioEconomy (IBE)

14 Jan 2018 – Current

 Florence, Italy

Activity carried out within the Geomatics section of the LaMMA Consortium

- Creation of a geospatial database of lakes and water basins of the regional territory.
- Development of a methodology for surveying and estimating the water capacity of water reservoirs with remote sensing
- Creation of the "Lakes Cadastre" geoportal for citizens and as a management tool for competent bodies
- Mapping and updating of riparian vegetation management interventions
- Updating of land use and cover maps, through photo interpretation and vector editing
- Homogenization of the databases relating to the dry stone walls of the Tuscany Region for quantification and conservation.
- Support for the mapping of the lithotechnical characteristics of Tuscany
- Development of databases of the intersections between infrastructures and water state property.

Research and experimental activities

- Methods for the analysis of soil erosion at basin scale, by means of simulations and empirical models
- Spectral signature analysis of territorial and environmental elements deriving from remotely sensed hyperspectral images
- Evaluation of tree stability by means of dynamic analyzes based on the use of accelerometers
- Evaluation of the dynamic effect of the wind on the crowns of trees, by means of web scraping procedures on meteorological data of opportunities
- Development of a geodatabase-based tree risk analysis process
- Study of the reinforcement and root anchoring by means of controlled pulling tests

Founding partner

Bluebiloba Startup Innovativa SRL - www.bluebiloba.com; www.forestsharing.com

30 Oct 2018 – Current

 Florence, Italy

Spinoff of University of Florence

- Surveys with Drones (UAV) for photogrammetry
- Forestry advise activities
- Development of Forest Sharing platform
- B-Forest software development for Precision Forestry
- Design of hydraulic-forestry protection works with Soil and Water Bioengineering techniques
- Tree stability assessment, via VTA

Professional course teacher (GIS and GNSS device)

Fondazione ITS E.A.T. - ECCELLENZA AGRO-ALIMENTARE TOSCANA

13 Feb 2020 – 9 Nov 2020

 Grosseto, Italy

progetto FARMER II 4.0 – TECNICO SUPERIORE PER L'INNOVAZIONE DELLE PRODUZIONI E TRASFORMAZIONI AGRARIE, AGRO-ALIMENTARI E AGRO-INDUSTRIALI" (codice progetto 242989 (BANDO POR FSE REGIONE TOSCANA 2014-2020 ASSE A Occupazione)


LABORATORY OF CARTOGRAPHY AND NEW TECHNOLOGIES FOR TERRITORIAL REPRESENTATION

24 hours

Professional course teacher (GIS and GNSS device)

PROFORMA SOC. COOP

3 Feb 2020 – 29 Aug 2020

 Borgo San Lorenzo (FI), Italy

Progetto Formagri 17 - Misura 1.1 Corso "Utilizzo di GIS e GPS"

20 hours

Work done during PhD

University of Florence. Department GESAAF - Department of Agricultural, Food and Forestry Systems

31 Oct 2014 – 29 Oct 2017

 Florence, Italy

Research project:

- Title: Indirect and non-destructive multidisciplinary tree root distribution analysis
- Topic: Indirect root systems detection of plants with geophysical techniques (ERT, GPR) and plant stability analysis through controlled pulling tests and accelerometers.

Others activities:

- Stability assessment of hydraulic-agricultural protection works (dry stone walls)

- Innovations research in Soil and Water Bioengineering
- Monitoring and management of riparian vegetation
- Technical design for soil conservation and defense in the riverbed and on the slopes
- Regional and International proposals for funding research project
- Teaching activities in university courses

Collaborator

Linnaeambiente Ricerca Applicata SRL

2 Sep 2014 – 31 Oct 2019

 Florence, Italy

- Tree Stability assessments in urban environments (via VTA)
- Instrumental investigations
- Management of intervention requests to the competent offices
- Technical consultant for legal defense
- Green design for gardens and recreational environments
- Impact assessments and compensation interventions planning

Internship

Union of Municipalities of Versilia - Soil Conservation

4 Feb 2011 – 21 Jun 2011

 Lucca, Italy

Design of soil and water Bioengineering works, proposals of applications for PSR call for the landslides restoration.

EDUCATION AND TRAINING

University of Florence. Department GESAAF - Department of Agricultural, Food and Forestry Systems

PhD in Sustainable management of agricultural resources, forestry and food

31 Oct 2014 – 6 Mar 2019

 Via San Bonaventura 15, 50145, Florence, Italy | <https://www.dagri.unifi.it/>

Field(s) of study: **Agro-forestry engineering**

Thesis: Research Title: Indirect and non-destructive multidisciplinary tree root distribution analysis



DiplomaDottorato (1)

Università degli Studi di Firenze - Scuola di Agraria

Master's degree in forest systems science and technology - LM73

9 Sep 2011 – 15 Apr 2014

 Piazzale delle Cascine, 18, 50144, Florence, Italy | <https://www.agraria.unifi.it/>

Field(s) of study: **Forestry**

Final grade: **110 Cum laude**

Thesis: Tools and methods for indirect roots detection. Study and applications in the slope stability

Study subjects: Forest Resources Management, Soil Defense, Forest Pathology and Entomology,

Phytosociology, Auxology, Remote Sensing, Pedology and Soil Functionality

Università degli Studi di Firenze - Scuola di Agraria

Degree in Environmental and Forest Science - L25

20 Sep 2008 – 24 Jul 2011

📍 Piazzale delle Cascine, 18, 50144, Florence, Italy | <https://www.agraria.unifi.it/>

Field(s) of study: **Forestry**

Final grade: **110 Cum laude**

Thesis: Durability of timber elements and root reinforcement in live cribwalls.

Study subjects: Mathematics, Chemistry, Botany, Forestry, Dendrometry, Topography, Wood Technologies, Forest Utilization, Economy and Estimation, Forest Genetics

Agricultural Technical High School - ITAS

Diploma of agricultural expert

3 Sep 2003 – 14 Jul 2008

📍 Via delle Cascine, 11, 50144, Florence, Italy | <https://www.agrariofirenze.gov.it/>

LANGUAGE SKILLS**Mother tongue(s)**

Italian

Other language(s)**English****Listening**

○ ○ ○ ○ ○ ○ ○

B2

Reading

○ ○ ○ ○ ○ ○ ○

C1

Spoken interaction

○ ○ ○ ○ ○ ○ ○

B1

Spoken production

○ ○ ○ ○ ○ ○ ○

B1

Writing

○ ○ ○ ○ ○ ○ ○

B2

Spanish

Listening

B2

Reading

B1

Spoken interaction

B1

Spoken production

B1

Writing

B2

DIGITAL SKILLS

R Project | AutoCAD | Ubuntu Linux | Dropbox | Libreoffice Suite | VMWare | Virtual Box
 | MS Office (Word Excel Power Point Access) | Teamviewer

GIS

QGIS | SAGA GIS | IDRISITerrSet | GRASS GIS | QField

Photo & Video editing

Photoshop GIMP RawTherapee | KdenLive | Pinnacle Studio | Paint

Communication

E-mail e social | Skype Zoom Meet | VPN

Cloud storage

Google Drive | Nextcloud | Megacz

DRIVING LICENCE**VOLUNTEERING****Operazione Mato Grosso**

11 May 2004 – Current | World

- Since 2004: Member of the volunteer movement: Operazione Mato Grosso - Free work and boy educational activities for charity.

- In 2011: Cooperation project: 5 months in Bolivia for the construction of civil dwellings, built with adobes (earth bricks and straw).
- Since 2014: Head of the first Solidarity Reuse Center in the province of Florence (promoted by the LIFE WASTELESS project) - in San Casciano VP (<https://www.facebook.com/riusocanciulle>)

OTHER SKILLS

Interests

- Amateur photographer (Canon and Fujifilm user)
- Hobby: VEGAN cooking
- Sport: swimming

CONFERENCES AND SEMINARS

10th International Wind and Trees Conference

20 Jun 2023 – 22 Jun 2023 | Villa Bolasco - Castelfranco Veneto (TV)

Scientists from a range of disciplines will have the opportunity to share advances in knowledge on topics including:

- Understanding damage patterns and processes in forests due to windstorms
- Mechanics of wind damage
- Tree acclimation and adaptation to the wind
- Designing wind-resistant and resilient forests

<https://windandtrees2023.com/>

18th Biennial Conference ERB 2022

7 Jun 2022 – 10 Jun 2022 | Isola d'Elba, Italy

Euromediterranean Network of Experimental and Representative Basins

New perspectives on hydrological and ecohydrological processes in small natural and human-impacted catchments

Oral session 7 (Erosion and sediment transport)

Title: Assessing Soil Erosion by Monitoring Hilly Lakes Silting

https://www.researchgate.net/publication/361484716_Assessing_Soil_Erosion_by_Monitoring_Hilly_Lakes_Silting

XIV CONVEGNO NAZIONALE GIT - Sezione di Geoscienze e Tecnologie Informatiche

17 Jun 2019 – 19 Jun 2019 | Melfi (PZ), Italy

Sez: TELERILEVAMENTO A SUPPORTO DEL MONITORAGGIO E DELLA MODELLAZIONE DEI PROCESSI IDRAULICO-IDROLOGICI

Titolo: Stima del volume di invasi di piccole e medie dimensioni: approccio basato sulla misura della profondità massima. Il caso della Regione Toscana (Italia).

World Forum on Urban Forests

27 Nov 2018 – 1 Dec 2018 | Mantova - Italy

Session: PS 5.3 The Future Changing Environment

Title of presentation: Indirect root distribution detection by 2D Electrical Resistivity Tomography. Application to Pinus pinea root system, in different soil type with a field approach



https://www.researchgate.net/publication/361483880_Indirect_root_distribution_detection_by_2D_Electrical_Resistivity_Tomography_Application_to_Pinus_pinea_root_system_in_different_soil_type_with_a_field_approach

International Symposium on Soil and Water Bioengineering in a Changing Climate

7 Sep 2017 – 8 Sep 2017 | Glasgow, Scotland

Thematic area: soil and water bioengineering techniques, materials, modelling, and design.

Title: on the tree stability: pulling tests and modelling to assess the root anchorage

EGU General Assembly 2017

23 Apr 2017 – 28 Apr 2017 | Wien, Austria

SSS2.16/GM7.7/HS11.50 - Agricultural terraces of the world. Their pedological, geomorphological and hydrological role (co-organized) - PICO session - EGU2017-18983.

Title: Monitoring and modelling for dry-stone walls terracement maintenance

Conferences Posters

- Laboratory tests about resistivity variation in soil, in connection with root rate and soil humidity and bulk density – EGU 2015
- Unusual meteorological phenomena: Vallombrosa forest windthrow caused by the storm of March 5th, 2015. Analyses and evaluations - SISEF 2015
- Studio della variazione della resistività del terreno in funzione della quantità di radici, dell'umidità e della densità del terreno. Prove di laboratorio. AIIA 2015
- On the tree stability risk: pulling tests in different soil conditions, tree bracing and root soil plate anchorage – EGU 2017
- Prefabricated and folding structures for soil and water bioengineering – EFIB Glasgow 2017
- Improvement of water harvesting systems for smallholder farmers' resilience in the Corridor Seco region, Guatemala – CUCS 2017
- Volume estimation of small to medium size lakes and water reservoirs: a max-depth based approach applied to Tuscany region (Italy) - EGU 2019
- Valutazione dell'interrimento di invasi collinari artificiali medio-piccoli in Toscana: rilievi batimetrici e stima delle variazioni volumetriche - GIT 2019
- Web scraping technology for a dynamics analysis of tree crown streamlining, in relationships with wind and meteorological data - Wind and Tree 2023
- Measurement of critical tree sway thresholds to determine the need for visual and instrumental monitoring to prevent the tree fall hazard in the urban environment - Wind and Tree 2023

PUBLICATIONS

2014

- Censini G., Giambastiani, et al – 2014 - **Metodi non distruttivi per il rilievo degli apparati radicali e per il monitoraggio degli elementi lignei in opera e negli interventi di ingegneria naturalistica** – *Quaderni di idronomia montana AIDI* – Memorie Convegno Sassari 26,27 Giugno 2014.

2017

- Preti F., Guastini E., Penna D., Dani A., Cassiani G., Boaga J., Deiana R., Romano N., Nasta P., Palladino M., Errico A., Giambastiani Y., Trucchi P., Tarolli P. - 2017 - **Conceptualization of water flow pathways in agricultural terraced landscapes** - *Land Degradation & Development* – LDD-17- 0136 – doi: 10.1002/ldr.2764.
- Giambastiani Y., Preti F., Errico A., Sani L. – 2017 - **On the tree stability: pulling tests and modelling to assess the root anchorage** - *Procedia Environmental Science, Engineering and Management*, 4 (2017) (4) 207-218 [ISSN: 2392 - 9537]

2018

- Yamuna Giambastiani, Alessandro Errico, Enrico Guastini, Franco Brucalassi, Leonardo Mazzanti, Federico Preti - 2018 - **Legname di douglasia per ingegneria naturalistica. L'esperienza del Casentino (AR) tra innovazione e valorizzazione.** *Sherwood* 233 Marzo Aprile 2018

- Penna, D., Hopp, L., Scandellari, F., (...), Giambastiani Y., Dawson, T.E., Kirchner, J.W. - 2018 - **Ideas and perspectives: Tracing terrestrial ecosystem water fluxes using hydrogen and oxygen stable isotopes** - Challenges and opportunities from an interdisciplinary perspective - *Biogeosciences* <https://doi.org/10.5194/bg-15-6399-2018>

- Laurita B, Castelli G, Giacomini A, Salazar M, Torres A, Giambastiani Y, Preti F, Bresci E - 2018 - **Participatory design of rooftop water harvesting systems for smallholder farmers' in the Corridor Seco region, Guatemala** - *Junco Journal of Universities and international development cooperation* - n.1/2018

2020

- Giambastiani, Y., Giusti, R., Cecchi, S., Palomba, F., Manetti, F., Romanelli, S., & Bottai, L. (2020). **Volume estimation of lakes and reservoirs based on aquatic drone surveys: The case study of Tuscany, Italy.** *Journal of Water and Land Development*. DOI 10.24425/jwld.2020.134200

2021

- D'Amico G, Vangi E, Francini S, Giannetti F, Nicolaci A, Travaglini D, Massai L, Giambastiani Y, Terranova C, Chirici G (2021). **Are we ready for a National Forest Information System? State of the art of forest maps and airborne laser scanning data availability in Italy.** *iForest* 14: 144-154. – doi: 10.3832/for3648-014 [online 2021-03-23].
- Cambi, M., Giambastiani, Y., Giannetti, F., Nuti, E., Dani, A., & Preti, F. (2021). **Integrated Low-Cost Approach for Measuring the State of Conservation of Agricultural Terraces in Tuscany, Italy.** *Water*, 13(2), 113.
- Giambastiani Y, Guastini E, Preti F, Censini G. (2021), **Laboratory tests about resistivity variation in soil, in connection with root presence** *Geophysical Research*, 2021, vol. 22, no. 2, pp. 46-61. <https://doi.org/10.21455/gr2021.2-3>

2022

- Giambastiani Y., Errico, A. Preti F., Guastini E., Censini G., - 2022 - **Indirect root distribution detection by 2D Electrical Resistivity Tomography. Application to Pinus pinea root system, in different soil type with a field approach.** *Urban Forestry & Urban Greening* 67 (2022) 127442 <https://doi.org/10.1016/j.ufug.2021.127442>
- Giambastiani, Y.; Giusti, R.; Gardin, L.; Cecchi, S.; Iannuccilli, M.; Romanelli, S.; Bottai, L.; Ortolani, A.; Gozzini, B. **Assessing Soil Erosion by Monitoring Hilly Lakes Silting.** *Sustainability* **2022**, *14*, 5649. <https://doi.org/10.3390/su14095649>
- Giachetti, A., Zini, G., Giambastiani, Y., & Bartoli, G. (2022). **Field Measurements of Tree Dynamics with Accelerometers.** *Forests*, 13(8), 1243.
- Giambastiani, Y., Romanelli, S., Giusti, R., Cecchi, S., Antonini, A., Bottai, L., ... & Gozzini, B. (2022, July). **Web scraping technology for a dynamics analysis of tree crown streamlining, in relationships with wind and meteorological data.** In *2022 IEEE Workshop on Complexity in Engineering (COMPENG)* (pp. 1-9). IEEE.

2023

- Giambastiani, Y., Biancofiore, G., Mancini, M., Di Giorgio, A., Giusti, R., Cecchi, S., ... & Errico, A. (2023). **Modelling the Effect of Keyline Practice on Soil Erosion Control.** *Land*, 12(1), 100.
- Giannetti, F., Laschi, A., Zorzi, I., Foderi, C., Cenni, E., Guadagnino, C., ... & Giambastiani, Y. (2023). **Forest Sharing® as an Innovative Facility for Sustainable Forest Management of Fragmented Forest Properties: First Results of Its Implementation.** *Land*, 12(3), 521.

CERTIFICATES

FORMAZIONE OBBLIGATORIA TEORICO PRATICA PER : ADDETTI AI SISTEMI DI ACCESSO E POSIZIONAMENTO MEDIANTE FUNI (ACCESSO ATTIVITÀ LAVORATIVA SU ALBERI)

11 Jun 2019

Treeclimber technical qualification

Formali s.r.l. agenzia formativa con accreditamento regionale n° PO0868, organizza, in virtù del "riconoscimento" concesso, ai sensi della L.R. n. 32/02 art. 17 comma 2), dall'UTR di Arezzo, Firenze e Prato con Decreto Dirigenziale n. 6828 del 23/05/2017

Codice AF20193720



AF20193720_YAMUNA GIAMBASTIANI

Advanced course on Biomechanics of the Trees Pistoia (Italy) 5-9 June 2017

4 Jun 2017 – 8 Jun 2017

Advanced knowledge and training on basic themes as well as research results related to plant physiology and biomechanics with special focus on plant stability. Speakers: Barry Gardiner, Bruno Moullia, Duncan Slater, Brian Kane, Frank Telewski, Gilman Edward, Francesco Ferrini.



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CORSO DI CULTURA IN ECOLOGIA Debris flows in a changing environment: processes, controls, consequences

6 Jun 2016 – 8 Jun 2016

52.mo CORSO DI CULTURA IN ECOLOGIA

San Vito di Cadore, 6-8 giugno 2016

UNIVERSITA' DEGLI STUDI DI PADOVA Dipartimento Territorio e Sistemi Agro Forestali

Centro Studi per l'Ambiente Alpino Lucio Susmel

COURSES WORKSHOPS SEMINARS

Tree risk management workshop: responsibility and litigations in the urban forestry policy development. Prof. Mark Duntemann

28 Jun 2016

AUTOCERTIFICAZIONE

Curriculum redatto ai sensi degli artt. 46 e 47 del D.P.R. 28.12.2000, N. 445

(Dichiarazioni sostitutive di certificazioni e dell'atto di notorietà).

Fiano, 28/06/2023

Consapevole che, ai sensi dell'art.76 del DPR 445/2000, le dichiarazioni mendaci, la falsità negli atti e l'uso di atti falsi sono punite ai sensi del Codice penale e delle leggi speciali vigenti in materia, dichiara sotto la propria responsabilità:

che quanto dichiarato nel seguente curriculum vitae et studiorum comprensivo delle informazioni sulla produzione scientifica corrisponde a verità.

In fede,

Dott. Yamuna Giambastiani

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