MAURIZIA SIGURA

Current position

Associate professor in Rural buildings and agro-forest land planning (AGR/10)

Institution

Department of Agricultural, Food, Environmental and Animal Sciences, University of Udine, Via delle Scienze 206, 33100 Udine, Italy

Education

1994. Degree in Agricultural Sciences, University of Udine, Italy

2004. Ph.D. in Economy, Ecology and Protection of Agricultural and Landscape-Environmental Systems, (XVI), University of Udine, Italy

Position

2021 - present. Associate Professor at Department of Agricultural, Food, Environmental and Animal Sciences at the University of Udine (Area 07 - Agricultural and veterinary sciences, 07C - Agricultural, forest and bio-systems engineering, AGR10 - Rural buildings and agro-forest land planning)

2005 - 2021. Researcher at Department of Agricultural, Food, Environmental and Animal Sciences at the University of Udine (Area 07 - Agricultural and veterinary sciences, 07C - Agricultural, forest and bio-systems engineering, AGR10 - Rural buildings and agro-forest land)

April 2017. National scientific qualification for Associate Professor - sector 07/C1 - Agricultural, forest and bio-systems engineering (from 28/03/2017 to 28/03/2023; Article 16, paragraph 1, Law 240/10)

Memberships

Italian Society of Agricultural Engineering
Association of European Culture expressed in Agricultural Landscapes
Ecosystem Services Partnership

Main Research interests

Application of remote sensing and GIS technologies for landscape pattern and landscape dynamic analysis, study of relationships between the natural component, anthropic activities and landscape patterns in agro-forestry systems and multifunctional rural areas. Study of ecosystem services, ecological networks and green infrastructures for sustainable rural land management and development.

Responsibilities

2022 – present. Responsible of educational guidance for incoming and outgoing students for Department of Agricultural, Food, Environmental and Animal Sciences- University of Udine

2017- present. Board Member of the Ph.D Program Environment and Life of the, University of Trieste and University of Udine

2016 to 2020, member of the Commissione Paritetica of the Department of Agri-food, Environmental and Animal Sciences, University of Udine

2013- 2018. Board Member of the Ph.D Program Agroenvironmental Science, University of Udine

International Research projects

- PULCHRA - Science in the City: Building Participatory Urban Learning Community Hubs through Research and Activation (Horizon 2020-SwafS-2018, EU.5.d) (scientific director and coordinator WP10) (https://pulchra-schools.eu). Aimed to develop new scientific knowledge for the city as an urban ecosystem, encouraging the use of innovative technologies (remote-sensing, web tools) to involve the community in participatory projects aimed to sustainability. September 2019 - to date (project end September 2022)
- Erasmus + Project, FEAL: multifunctional Farming for the sustainability of European Agricultural Landscapes (Nº:2016-1-SK01-KA202-022502). Aimed to analyze the potential of European landscapes as an economic added value for young farmers, the promotion of knowledge of European landscapes as basic structure for the farm multifunctionality and development of materials supporting young farmers learning (https://cs.feal-future.org/en) (from 15-11-2016 to 30-11-2018)
- PALPIS - Participatory planning of cross-border areas of high conservation value in the south of Julian Pre-Alps Aimed to define a GIS infrastructure to support envitonmental planning in the Julian Pre-Alps areas (coordinator Regional natural park of the Julian Alps). Project funded by Interreg IIIA Italy-Slovenia program (2005-2007; partner).
- IMAGES - Improving Agri-Enviromental Policies: a simulation Approach to the Role of the Cognitive Properties of farmers and Institutions (CEC-FAIR-CT96_2092). Aimed to develop methodologies and tools to evaluate the impact of different agri-environmental measures on the agricultural system developing study cases. (https://cordis.europa.eu/project/id/FAIR962092/it) (from 01-02-1997 to 30-06-2000).

National Research projects and projects with local players

- Information system on natural capital and ecosystem services for agro-forestry of the Friuli Venezia Giulia region to support agricultural policy planning and monitoring, aimed to collect spatial information and develop geo-databases in order to fill knowledge gaps on hight natural value farming areas, ecosystem services and irrigation systems (responsible research unit, May 2023-present). Research funded by regional Administration
- Vegetation role in ecosystem services provision at regional scale, aimed to ecosystem services mapping, and study of their interactions with antrophogenic pressures (responsible of research unit, February 2021- present) Research funded by regional Administration
- National research program PRIN 2020 "Eye-Land: a crowd-sensing geospatial database for the monitoring of rural areas" aimed at creating and testing a system based on webgis platform, for the collection and distribution of Groud-Truths to support the analysis of the territory through remote sensing (responsible research unit, May 2021 - date).

- GREVISLIN - Green infrastructures for the conservation and improvement of the state of habitats and protected species along the rivers (Interreg IT-SLO strategic, OS 3.2) (subcontractor of Friuli Venezia Giulia region, WP 3.1). aimed to study green infrastructure and related ecosystem services at river basin scale considering the ecological network model, and interactions between nature and intensity of land use. September 2019 - to September 2022).
- Management Natura 2000 SIC IT 3310009 Magredi delCellina, ZPS Magredi di Pordenone - Definition of an informative system on environmental characteristics, human pressures and definition of proposals for conservative and management measures of Natura 2000 area (SIC and ZPS) (from 01-05-2007 to 30-06-2008). Research funded by Friuli Venezia Giulia Region.
- MULTIFARM - environmental sustainability for the multifunctionality of agriculture, aimed to the evaluation of conservative agriculture potential to improve biodiversity, and agricultural landscape (coordinator, 2011-2012), research funded by Friuli Venezia Giulia Region (LR 10/11/2005 No. 26, article 17)
- Regional Environmental Landscape Plan – aimed to support the development of the Regional Environmental Landscape Plan with particular focus on ecological network and rural landscapes organization (corodinator 2015-2017), research funded by Friuli Venezia Giulia Region.
- Ecological Network in Marine Areas – aimed to model the ecological network in marine and land areas of Triest coast (coordinator 2018), (UNESCO - RESERVE MaB) funded by WWF
- Landscapes units for Dolomites management - aimed to define e methodological aproach to map Landscape Units of Dolomites sites, (2016) research funded by Province of Pordenone, Friuli Venezia Giulia Region
- Research project TREFOR - TREE diversity FOR Ecosystem services (competitive tender for the award of grants to start-up projects in 2018, Department of Agri-food, Environmental, Animal Sciences). The goal is to study the relationships between forest biodiversity and agronomic and ecosystem services offered in agricultural landscapes (May 2020 to 2022)
- SEES-PIG-Multi-regional Solutions to improve the Environmental and Economic Sustainability of PIG manure management in the Regions of the Po and Veneto basin, project (Agri-food and Research Funds AGER). Activities involved the development of territorial databases (https://www.progettoager.it/index.php/settore/il-progetto-2008-2015/il-progetto-2008-2015-zootecnico) (01-09-2011 to 01-03-2014)
- Landscapes of Dolomites aimed to define guidelines to support the implementation of management plan for Dolomites Unesco Heritage (responsible for the definition of landscape units guidelines, project funded by Dolomites Foundation) research funded by Friuli Venezia Giulia Region (01-02-2012 to 31-07-2014)
- project ALi.For.MiDI. - Experimentation of innovative methods of LiDAR data analysis for the identification of the structure of the forest, the forest types, the stored carbon and the mitigation of hydrogeological instability (funding from the Friuli VeneziaGiulia Region, LR 26 of 10/11/2005, Article 16). Experimentation of laser scanning data analysis methods in some forest situations characteristic of the Friuli Venezia Giulia Region in order to create GIS maps of the vertical and horizontal structure and of the density of the forest (from 01-02-2010 to 30-09-2011)
- Management Natura 2000 karst area - Definition of an informative system on environmental characteristics, human pressures and definition of proposals for conservative and management measures of Natura 2000 area (SIC and ZPS) IT 3340006 “Carso Triestino e Goriziano”. (2007-2008). Research funded by Friuli Venezia Giulia Region.

Selection of most relevant peer review publications (last ten years)

Alexandra Kruse; Jana Špulerova; Csaba Centeri; Sebastian Eiter; Viviana Ferrario; Suzan Jurgens; Drago Kladnik; Zdeněk Kučera; Teodor Marusca; Dragomir Neculai; Hans Renes; Hanne Sickel; Maurizia Sigura; Martina Slámová; Kari Stensgaard; Peter Strasser. (2023) Country Perspectives on Hay-Making Landscapes as Part of the European Agricultural Heritage. Land, Volume 12, Issue 9, 1694

M. Tucker, Mateja Šmid Hribar, Mimi Urbanc, Nevenka Bogataj, Alexey Gunya, Romina Rodela, Maurizia Sigura, Lucia Piani. Governance of interdependent ecosystem services and common-pool resources, Land Use Policy, Volume 127, 2023, 106575, ISSN 0264-8377, https://doi.org/10.1016/j.landusepol.2023.106575.

Olmo V, Sigura M, Alberti G (2022). Forest plantations with public subsidies: to harvest or not to harvest, this is the question. iForest 15: 229-233. - doi: 10.3832/ifor3943-015

Liccari, F.,Sigura, M.,Bacaro, G."Use of Remote Sensing Techniques to Estimate Plant Diversity within Ecological Networks: A Worked Example." Remote Sensing. 14.19 (2022): Remote Sensing. , 2022, Vol.14(19). Web.

Liccari, F.,Boscutti, F.,Bacaro, G., Sigura, M.. "Connectivity, Landscape Structure, and Plant Diversity across Agricultural Landscapes: Novel Insight into Effective Ecological Network Planning." Journal of Environmental Management 317 (2022): Journal of Environmental Management , 2022, Vol.317. Web.

Liccari F., Sigura M., Tordoni E., Boscutti F., Bacaro G. Determining plant diversity within interconnected natural habitat remnants (Ecological network) in an agricultural landscape: A matter of sampling design?. Diversity, 2022. vol. 14, ISSN: 1424-2818, doi: 10.3390/d14010012

Boscutti F., Lami F., Pellegrini E., Buccheri M., Busato F., Martini F., Sibella R., Sigura M., Marini L. Urban sprawl facilitates invasions of exotic plants across multiple spatial scales. Biological Invasions, 2022. ISSN: 1387-3547, doi: 10.1007/s10530-022-02733-6

Lami F., Vitti S., Marini L., Pellegrini E., Casolo V., Trotta G., Sigura M., Boscutti F. Habitat type and community age as barriers to alien plant invasions in coastal species-habitat networks. Ecological Indicators, 2021. vol. 133, ISSN: 1470-160X, doi: 10.1016/j.ecolind.2021.108450

Dorigo L., Boscutti F., Sigura M. Landscape and microhabitat features determine small mammal abundance in forest patches in agricultural landscapes. Peerj, 2021. vol. 9, ISSN: 2167-8359, doi: 10.7717/peerj.12306

Lami F, Boscutti F, Masin R, Sigura M, Marini L. Seed predation intensity and stability in agro-ecosystems: Role of predator diversity and soil disturbance. Agric Ecosyst Environ 2020;288. doi:10.1016/j.agee.2019.106720

Špulerová J, Kruse A, Branduini P, Centeri C, Eiter S, Ferrario V, Gaillard B, Gusmeroli F, Jurgens S, Kladnik D, Renes H, Roth M, Sala G, Sickel H, Sigura M, Štefunková D, Stensgaard K, Strasser P, Ivascu CM, Öllerer K. Past, present and future of hay-making structures in europe. Sustainability 2019;11(20). doi:10.3390/su11205581

Rodela R, Tucker CM, Šmid-Hribar M, Sigura M, Bogataj N, Urbanc M, Gunya A. Intersections of ecosystem services and common-pool resources literature: An interdisciplinary encounter. Environ Sci Policy 2019;94:72-81. doi:10.1016/j.envsci.2018.12.021

Boscutti F, Sigura M, De Simone S, Marini L. Exotic plant invasion in agricultural landscapes: A matter of dispersal mode and disturbance intensity. Appl Veg Sci 2018;21(2):250-7. doi:10.1111/avsc.12351

Vizzari M, Hilal M, Sigura M, Antognelli S, Joly D. Urban-rural-natural gradient analysis with CORINE data: An application to the metropolitan france. Landsc Urban Plann 2018;171:18-29. doi:10.1016/j.landurbplan.2017.11.005

De Simone S, Sigura M, Boscutti F. Patterns of biodiversity and habitat sensitivity in agricultural landscapes. J Environ Plann Manage 2017;60(7):1173-92. doi:10.1080/09640568.2016.1205971

Dainese M, Montecchiari S, Sitzia T, Sigura M, Marini L. High cover of hedgerows in the landscape supports multiple ecosystem services in mediterranean cereal fields. J Appl Ecol 2017;54(2):380-8. doi:10.1111/1365-2664.12747

Tamburini G, Pevere I, Fornasini N, De Simone S, Sigura M, Boscutti F, Marini L. Conservation tillage reduces the negative impact of urbanisation on carabid communities. Insect Conserv Diversity 2016;9(5):438-45. doi:10.1111/icad.12181

Tamburini G, De Simone S, Sigura M, Boscutti F, Marini L. Soil management shapes ecosystem service provision and trade-offs in agricultural landscapes. Proc R Soc B Biol Sci 2016;283(1837). doi:10.1098/rspb.2016.1369

Tamburini G, De Simone S, Sigura M, Boscutti F, Marini L. Conservation tillage mitigates the negative effect of landscape simplification on biological control. J Appl Ecol 2016;53(1):233-41. doi:10.1111/icad.12181

Boscutti F, Marcorin I, Sigura M, Bressan E, Tamberlich F, Vianello A, Casolo V. Distribution modeling of seagrasses in brackish waters of grado-marano lagoon (northern adriatic sea). Estuar Coast Shelf Sci 2015;164:183-93. doi:10.1016/j.ecss.2015.07.035

Vizzari M, Sigura M. Landscape sequences along the urban-rural-natural gradient: A novel geospatial approach for identification and analysis. Landsc Urban Plann 2015;140:42-55. doi:10.1016/j.landurbplan.2015.04.001

Vizzari M, Antognelli S, Hilal M, Sigura M, Joly D. Ecosystem services along the urban–rural–natural gradient: An approach for a wide area assessment and mapping. Lect Notes Comput Sci 2015;9157:745-57. doi:10.1007/978-3-319-21470-2_54 Retrieved from www.scopus.com

Gentili S, Sigura M, Bonesi L. Decreased small mammals species diversity and increased population abundance along a gradient of agricultural intensification. Hystrix 2014;25(1). doi:10.4404/hystrix-25.1-9246

Boscutti F, Sigura M, Gambon N, Lagazio C, Krüsi BO, Bonfanti P. Conservation tillage affects species composition but not species diversity: A comparative study in northern italy. Environmental Management 2014;55(2):443-52. doi:10.1007/s00267-014-0402-z

Alberti G, Boscutti F, Pirotti F, Bertacco C, de Simon G, Sigura M, Cazorzi F, Bonfanti P. A LiDAR-based approach for a multi-purpose characterization of alpine forests: An italian case study. IForest 2013;6(1):156-68. doi:10.3832/ifor0876-006

Vizzari M, Sigura M. Urban-rural gradient detection using multivariate spatial analysis and landscape metrics. Journal of Agricultural Engineering 2013;44:453-9. doi:10.4081/jae.2013.(s1):e91

Publications metrics (Scopus, Updated: 28/06/2023)

Source	SCOPUS
Results found	34
Sum of the Times Cited	666
h-index	12

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