

PERSONAL INFORMATION

Paola A. Deligios

[Sex](#) | [Date of birth](#) | [Nationality](#)

POSITION

Fixed-term research assistant

DEGREE

Ms in Agricultural Sciences and Technologies
PhD in Agrometeorology and Ecophysiology of the Cropping and Forestry Systems

WORK EXPERIENCE

November 2019 – current position

Fixed-term researcher

University of Sassari

- Research activities dealing with cropping simulation modelling, from theoretical aspects to practical applications.
- Agrometeorological modelling of crops growth and irrigation scheduling, soil-water-atmosphere relations.
- Lecturing Organic cropping systems

September 2016 – September 2018

Post-doc researcher

University of Sassari

- Research activities dealing with collection of physiological and morphological crop, creation of databases aimed at setting up innovative irrigation scheduling systems.

June 2014 – June 2016

Post-doc researcher

University of Sassari

- Research activities dealing with determination of the mineral nutrition needs of globe artichoke by quantifying season-long nutrient uptake, partitioning, and remobilization.

May 2013 – May 2014

Post-doc researcher

University of Sassari

- Research activities dealing with determination of the mineral nutrition needs of globe artichoke by quantifying season-long nutrient uptake, partitioning, and remobilization.

June 2012 – May 2013

Post-doc researcher

University of Sassari, NRD - Desertification Research Centre

- Research activities dealing with development of crop yield forecasting systems based on crop simulation models. Analyst for crop yield forecasts

June 2010 – June 2012

Junior researcher

University of Sassari – Sardinia Region

- Research activities dealing with development of rapeseed growth, development and production forecasting simulation model based on Decision Support System model (DSS).

May 2010

Post-doc researcher

University of Sassari, NRD - Desertification Research Centre

- Research activities dealing with development of crop yield forecasting systems based on crop simulation models. Analyst for crop yield forecasts

EDUCATION AND TRAINING

November 2006 – November 2009

PhD in Agrometeorology and Ecophysiology of the Cropping and Forestry Systems

University of Sassari

- Analysis of ecophysiological processes in Mediterranean environments with particular reference to water stress conditions.
- Modeling and simulation of crop water requirements and estimation of irrigation efficiency, in consideration of climate change in progress.
- Management and use of biodiversity and agro-biodiversity for the sustainability of crop systems.
- PhD dissertation on rapeseed cropping system modelling

September 1995 – July 2006

Ms degree in Agricultural Sciences and Technologies

University of Sassari

- Knowledge and methodologies dealing with optimization of the main production processes and the ability to understand the key indicators related to agricultural production systems in reference to environmental quality.
- Ms thesis on drought survival in *Dactylis glomerata* and *Festuca arundinacea* under water stress condition.

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	Proficient user	Independent user	Basic user	Basic user	Proficient user
French	Independent user	Independent user	Basic user	Basic user	Independent user

Job-related skills

- Expert in cropping systems modelling (author of an internationally widespread-used module of DSS crop model).

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Basic user	Basic user	Basic user	Basic user	Basic user

- Good knowledge of the applications of the suite Microsoft Office.
- Good knowledge of the statistical software SAS, and R package.

 ADDITIONAL INFORMATION

National Scientific Qualification	Achievement of the National Scientific Qualification (ASN) for the functions of associate professor for the field of competition 07/B1 – AGR02 (art. 16, comma 1, Legge 240/10) (validity 22 October 2018 - 22 October 2023)
Bibliometric Indicators	Scopus Author ID 55612682300 Documents: 27 Total citations: 373 <i>h</i> -index: 9
Presentations	<ul style="list-style-type: none"> ▪ Speaker at X International Symposium on Artichoke Cardoon and their Wild Relatives, 12-15 May 2019, Orihuela, Spain, organized by International Society of Horticultural Science. ▪ Speaker at Workshop "Maslowaten – PV pumping", 16 February 2018, Sassari, Italy, organized by University of Sassari. ▪ Speaker at Conference on Renewable Energies Crops in Sardinia: Future Perspective nad Research Activities. 14 May 2011, Sassari, Italy, organized by University of Sassari.
Book chapter	<ul style="list-style-type: none"> ▪ RUDA P., (...), DELIGIOS P.A., SANNA G., PIRAS F., LEDDA L. (2019) Accumulo di sostanza secca e asportazioni di azoto, fosforo e potassio nelle cultivar di carciofo più coltivate in Sardegna in tre importanti areali di coltivazione. In Ricerca e innovazione sul carciofo in Sardegna, Agris Sardegna (Eds.), Cagliari, pp. 105-125 ▪ CANU S., (...), DELIGIOS, P.A., LEDDA, L., SULAS L. (2017) Inoculation and fertilization affect sulla performance in a new cultivation area. In: C. Porqueddu A. Franca G. Lombardi G. Molle G. Peratoner A. Hopkins (eds) Grassland resources for extensive farming systems in marginal lands: major drivers and future scenarios. Grassland Science in Europe, vol. 22, Wageningen: Wageningen Academic Publishers, ISBN: 978-88-901771-9-4 ▪ SONALI P., (...), DELIGIOS P.A., (...) (2015) AgMIP coordinated climate-crop modeling project (C3MP): methods and protocols. In: Sonali P. McDermid et al. Handbook of Climate Change and Agroecosystems: The Agricultural Model Intercomparison and Improvement Project (AgMIP). vol. 3, p. 191-220, LONDON: Imperial College Press, ISBN: 9781783265633 ▪ DELIGIOS PA, et al. (2014) Annual and Perennial Crops for Bioenergy: Soil and Environmental Issues. In: Shishir Sinha;K.K. Pant. (a cura di): Acquisition Editor: J.N. Govil, FERTILIZER TECHNOLOGY I Synthesis. p. 635-658, HOUSTON, TEXAS-77072: Studium Press LLC, ISBN: 1-62699-044-1 ▪ LEDDA, L, FARCI R, DELIGIOS PA, CARBONI G, LAZZERI L. (2011). Filiera Biodiesel ed olio tal quale – Attività realizzate - Regione Sardegna. In: Fidalma D'Andrea, Energie da biomasse agricole e forestali: miglioramento ed integrazione delle filiere dei biocarburanti e della fibra per la produzione di energia elettrica e termica - Bioenergie. p. 33-34, Roma: Edizioni Nuova Cultura, ISBN: 9788861347533 ▪ ROGGERO, PP, BAGELLA, S, DELIGIOS PA, LEDDA, L, GUTIERREZ, MM. (2011) Gestione dell'abbandono dei seminativi italiani in aree svantaggiate. In: I GEORGOFILI - quaderni 2010-VIII. In: Paolo Nanni, Situazione dei seminativi nel quadro dell'agricoltura italiana. vol. VIII, p. 147-171, Firenze: Accademia dei Georgofili, ISBN: 978-88-596-0978-0

Publications on international journals with Impact Factor (ISI SCOPUS)

- **DELIGIOS, P.A.** et al. (2020) Effects of physical, mechanical and hormonal treatments of seed-tubers on bud dormancy and plant productivity. *Agronomy* 10, 33. DOI: 10.3390/agronomy10010033
- SULAS, L. (...) **DELIGIOS, P.A.**, LEDDA, L., CANU, S. (2019) Contribution to shoot dry matter, N fixation and qualitative traits in sulla leaves affected by inoculation and fertilization treatments. doi:10.3390/agronomy9060289
- **DELIGIOS P.A.** et al. (2019) The influence of herbicide underdosage on the composition and diversity of weeds in oilseed rape (*Brassica napus* L. var. *oleifera* D.C.) Mediterranean fields. DOI:10.3390/su11061653
- TODDE G., MURGIA L., **DELIGIOS P.A.**, (...), NARVARTE L. (2019) Energy and environmental performances of hybrid photovoltaic irrigation systems in Mediterranean intensive and super-intensive olive orchards. DOI: 10.1016/j.scitotenv.2018.10.175
- SOLINAS S., **DELIGIOS P.A.**, (...) LEDDA L. (2019) A land-based approach for the environmental assessment of Mediterranean annual and perennial energy crops. DOI: 10.1016/j.eja.2018.11.007
- **DELIGIOS P.A.** et al. (2019) Climate change adaptation and water saving by innovative irrigation management applied on open field globe artichoke. DOI 10.1016/j.scitotenv.2018.08.349
- COSSU M., COSSU A., **DELIGIOS P.A.**, (...) YANO A. (2018) Assessment and comparison of the solar radiation distribution inside the main commercial photovoltaic greenhouse types in Europe. DOI: 10.1016/j.rser.2018.06.001
- DE MENNA F., (...), **DELIGIOS P.A.**, SOLINAS S., LEDDA L. (2018) Optimization of agricultural biogas supply chains using artichoke byproducts in existing plants. DOI: 10.1016/j.agsy.2018.06.008.
- SPANU, E., **DELIGIOS, P.A.** (...), LEDDA, L. (2018) Effects of alternative cropping systems on globe artichoke qualitative traits. DOI 10.1002/jsfa.8558
- **DELIGIOS P.A.** et al. (2018) Low-input herbicide management: effects on rapeseed production and profitability. DOI:10.3390/su10072258
- SULAS, L., PILUZZA, G., SALIS, M., **DELIGIOS, P.A.**, LEDDA, L., CANU, S. (2017) Cropping systems sustainability: Inoculation and fertilisation effect on sulla performances in a new cultivation area. doi:10.4081/ija.2017.938
- **DELIGIOS, PA.** et al. (2017) Stable nutrient flows in sustainable and alternative cropping systems of globe artichoke. <https://doi.org/10.1007/s13593-017-0465-3>
- COSSU, M., LEDDA, L., **DELIGIOS, P.A.**, (...), PAZZONA, A., YANO, A. (2017) Solar light distribution inside a greenhouse with the roof area entirely covered with photovoltaic panels. DOI 10.17660/ActaHortic.2017.1182.5
- **DELIGIOS, P.A.** et al. (2017) Modeling tomato growth and production in a photovoltaic greenhouse in southern Italy. DOI 10.17660/ActaHortic.2017.1182.24
- COSSU, M., (...), **DELIGIOS, P.A.**, SIRIGU, A., CHESSA, F., PAZZONA, A. (2017) Effects of the photovoltaic roofs on the greenhouse microclimate. DOI 10.17660/ActaHortic.2017.1170.57
- **DELIGIOS, P.A.** et al. (2017) Effect of input management on yield and energy balance of cardoon crop systems in Mediterranean environment. DOI 10.1016/j.eja.2016.10.016.
- FRONZEK, S., (...), **DELIGIOS, P.**, (...), RÖTTER, R.P. (2017) Classifying multi-model wheat yield impact response surfaces showing sensitivity to temperature and precipitation change. <http://dx.doi.org/10.1016/j.agsy.2017.08.004>
- DONO, G., (...), **DELIGIOS, P.A.**, (...), ROGGERO, P.P. (2016) Winners and losers from climate change in agriculture: Insights from a case study in the Mediterranean basin. <http://dx.doi.org/10.1016/j.agsy.2016.05.013>
- DE MENNA, (...), **DELIGIOS, P.A.**, SOLINAS, S., LEDDA, L. (2016) Potential biogas production from artichoke byproducts in Sardinia, Italy. doi:10.3390/en9020092
- PIRTIOJA, N., (...), **DELIGIOS, P.A.**, (...), RÖTTER, R.P. (2015) Temperature and precipitation effects on wheat yield across a European transect: a crop model ensemble analysis using impact response surfaces. doi: 10.3354/cr01322.
- SOLINAS, S., (...), **DELIGIOS, P.A.**, DORO, L., LEDDA, L. (2015) Environmental consequences of the conversion from traditional to energy cropping systems in a Mediterranean area. <http://dx.doi.org/10.1016/j.eja.2015.07.008>
- COCCO, D., **DELIGIOS, P.A.***, (...), CARBONI, G. (2014) LCA Study of oleaginous bioenergy chains in a Mediterranean environment. <http://dx.doi.org/10.3390/en7106258>.
- COSSU, M., MURGIA, L., LEDDA, L., **DELIGIOS, P.A.**, SIRIGU, A., CHESSA, F., PAZZONA, A. (2014) Solar radiation distribution inside a greenhouse with south-oriented photovoltaic roofs and effects on crop productivity. <https://doi.org/10.1016/j.apenergy.2014.07.070>
- LEDDA, L., **DELIGIOS, P.A.**, FARCI, R., SULAS, L. (2013) Biomass supply for energetic purposes from some *Cardueae* species grown in Mediterranean farming systems. <http://dx.doi.org/10.1016/j.indcrop.2013.03.013>.
- **DELIGIOS, P.A.** et al. (2013) Predicting growth and yield of winter rapeseed in a Mediterranean environment: Model adaptation at a field scale. <https://doi.org/10.1016/j.fcr.2013.01.017>
- **DELIGIOS, P.A.** et al. (2008) Integration of oil-seed crops in Mediterranean agro-pastoral systems to supply bio-fuels to local power industry. ISSN 1125-4718.

Conferences

- **DELIGIOS, P.A.** et al (2019) Leaf and plant water use efficiency in globe artichoke cv 'Spinoso sardo' under different irrigation water managements. In X International Symposium on Artichoke Cardoon and their Wild Relatives, pp. Orihuela, Spain, 12-15 March 2019
- **DELIGIOS, PA,** et al (2016) Energetic Exploitation of Crop Residues from Globe Artichoke. In: Proceedings of the XLV Conference of SIA p. 213-214, Sassari, Italy, 20-22 September.
- RUIZ-RAMOS M., (...), **DELIGIOS P.A.**, (...), RÖTTER R.P. (2016) An ensemble of projections of wheat adaptation to climate change in Europe analyzed with impact response surfaces. In: Crop modeling for agriculture and food security under global change. p. 135-136, Berlin, 15-17 March.
- FRONZEK, S. (...), **DELIGIOS P.A.**, (...), R.P. RÖTTER (2016) Classifying simulated wheat yield responses to changes in temperature and precipitation across a European transect. In: Crop modeling for agriculture and food security under global change. p. 67-68, Berlin, 15-17 March.
- WANG E., (...), **DELIGIOS P.A.**, (...), WEYMANN W. (2016) Inter-comparison of crop models for simulating canola growth and yield. In: AgMIP6 Global Workshop - Oral and poster abstracts. p. 6, Le Corum, Montpellier, France, 28-30 June.
- EHRHARDT, F, (...), **DELIGIOS, PA**, (...), ZHANG, W. (2015) An international intercomparison and benchmarking of crop and pasture models simulating GHG emissions and C sequestration. In Proceedings of the Climate Smart Agriculture 2015 - 3rd Global Science Conference, Le Corum, Montpellier, France, 16-18 March.
- PIRTIOJA N, (...), **DELIGIOS, PA**, (...) RÖTTER, R. (2015) Wheat yield sensitivity to climate change across a European transect for a large ensemble of crop models Proceedings of the Climate-Smart Agriculture 2015 - 3rd Global Science Conference - 64-65, Le Corum, Montpellier, France, 16-18 March.
- PIRTIOJA N, (...), **DELIGIOS PA**, (...) (2014). Examining wheat yield sensitivity to temperature and precipitation changes for a large ensemble of crop models using impact response surfaces. In: Modelling climate change impacts on crop production for food security. p. 18-19, Oslo, 10-12 February.
- GIRALDO L, (...), **DELIGIOS PA**, (...), ROGGERO PP (2014) Representing the links among climate change forcing, crop production and livestock, and economic results in an agricultural area of the Mediterranean with irrigated and rain-fed farming activities p. 42 Oslo, 10-12 February.
- DONO, G, CORTIGNANI, R, **DELIGIOS, PA**, (...) VITALI, A. (2014) Productive and economic adaptation of Mediterranean agriculture to climate change. In: Proceedings of the Annual Meeting of the Austrian Society of Agricultural Economics, Wien.
- SIRIGU A, (...) **DELIGIOS PA**, (...), LEDDA, L. (2013) Aspetti Fisiologici e Produttivi della Coltivazione del Pomodoro da Mensa in Serra Fotovoltaica. In: Proceedings of the XLII Conference of SIA "Intensificazione sostenibile della produzione agricola e sicurezza alimentare". p. 397-399, ISBN: 978-88-908499-0-9, Reggio Calabria, Italy, 18-20 September.
- CHERGIA AP, **DELIGIOS PA**, FARCI R, LEDDA, L. (2013) Differenziazione a Fiore della Gemma Apicale in Carciofo: Interazione tra Temperatura ed Applicazione di Acido Gibberellico. In: Proceedings of XLII Conference of SIA, p. 2010-2015, Reggio Calabria, Italy, 18-20 settembre 2013
- DONO G, CORTIGNANI R, **DELIGIOS PA**, (...), ROGGERO, PP. (2013) Economic assessment of the impact of uncertainty associated with short-run change in climate variability in Mediterranean farming systems. In: United Nations Convention to Combat Desertification. Extended Abstracts. UNCCD 2nd Scientific Conference. Bonn: UNCCD, Bonn, pp. 97-98.
- **DELIGIOS P.A.** et al. (2012) Impatto dei cambiamenti climatici sulla produzione di colza da bioenergia in un ambiente mediterraneo. In: Proceedings of XLI Conference of SIA, p. 458-460, Bari, 18-21 September.
- **DELIGIOS P.A.** et al. (2010) Gestione delle Infestanti del Colza (Brassica napus var. oleifera) in Ambiente Mediterraneo: Risultati preliminari. In: Proceedings of the XXXIX Conference of SIA p. 95-96, Roma, 20-22 September.
- LEDDA, L, (...), **DELIGIOS PA**, LEONI S. (2007) Influenza del materiale di propagazione e della tecnica vivaistica sulla fenologia e dinamica di produzione in carciofo Spinoso Sardo. In: Proceedings of VIII SOI Scientific Days, Sassari, 8-12 May..

- Projects**
- Research unit member in the FSC 2014-2020 project “Rapporti quantitativi e qualitativi del ciclo del selenio nella filiera degli ovini da latte in Sardegna: determinazione della variabilità pedologica, floristica e animale (SEL-OVIN)” [funded by Sardinia Region]
 - Participant in research activities in the project Agricultural Model Intercomparison and Improvement Project (AgMIP) [funded by CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS)].
 - Participant in research activities in the H2020 project "MARket uptake of an innovative irrigation Solution based on LOW WATER-ENERgy consumption, MASLOWATEN" [funded by European Commission]
 - Research unit member in the POR-FESR project “Innovazione verso la sostenibilità del sistema colturale carciofo a scala aziendale: “Spinoso sardo” in regime biologico (Ecocynara)” [funded by Sardinia Region].
 - Research unit member in the JPI FACCE project “MACSUR” (Modelling European Agriculture with Climate Change for Food Security) [funded by Italian Ministry of Agricultural Food and Forestry Policies]
 - Participant in research activities in the FIRB project "Metodologie multidisciplinari e innovative per la gestione sostenibile dei sistemi agrari" [funded by Italian Ministry of Education, University and Research].
 - Participant in research activities in the project "Energia da fotovoltaico in serra: studio dei parametri ambientali limitanti la coltivazione del pomodoro (ORTILUX)" [funded by Sardinia Region].
 - Coordinator and principal investigator in the POR-FSE project “Influenza dei principali fattori agrometeorologici su fenologia e produzione in Brassica napus v. oleifera DC: calibrazione di un modello di simulazione” [funded by Sardinia Region].
 - Participant in research activities in the project "Valutazione delle potenzialità produttive delle colture erbacee per la produzione di biocarburanti in Sardegna" [funded by Sardinia Region].
 - Participant in research activities in the project “Analisi dell’impatto dei cambiamenti climatici sui sistemi colturali, con particolare riferimento alle principali colture erbacee” Linea 2 del progetto nazionale “AGROSCENARI – Scenari di adattamento dell’agricoltura italiana ai cambiamenti climatici (2008-2013)” [funded by Italian Ministry of Agricultural Food and Forestry Policies]
 - Participant in research activities in the project Energie da biomasse agricole e forestali: miglioramento ed integrazione delle filiere dei biocarburanti e della fibra per la produzione di energia elettrica e termica (BIOENERGIE) – Sottoprogetto: Colture da combustibili e da biomassa annuali e poliennali in ambiente caldo arido mediterraneo” [funded by Italian Ministry of Agricultural Food and Forestry Policies]
- Memberships**
- Member of the Italian Society for Horticultural Science
 - Member of the editorial board of AGRONOMY-BASEL (Journal Impact Factor 2.259)
- Teaching**
- Co-supervisor of 10 BS dissertations and 7 MS thesis
 - Sustainable cropping systems (University of Sassari; MS course).
 - Biomass supply chain for bioenergy (University of Sassari, Level II International Master on Green Chemistry and Renewable Energy course)