

Marjan (Maria Johanna Elisabeth) Jongen  
*Post-Doctoral researcher*

## Curriculum vitae of Marjan Jongen

### Identification

**Name:** Marjan (Maria Johanna Elisabeth) Jongen

**Place of Birth:** Maastricht, The Netherlands

**Date of Birth:** 25.07.1968

**Institutional Address:**

- Centro de Estudos Florestais (CEF), Instituto Superior de Agronomia, Universidade de Lisboa, Tapada da Ajuda, 1349-017 Lisboa.
- MARETEC/LARSYS, Departamento de Engenharia Mecânica, Instituto Superior Técnico, Universidade de Lisboa, Av. Rovisco Pais 1, 1049-001 Lisboa

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### Research interests

Plant ecophysiology/grassland ecology; with emphasis on plant responses to environmental variables, such as elevated carbon dioxide, nutrients, water; role of plant-fungal symbiosis in plant responses to environmental stress; interspecific competition in grassland ecosystems; assessment of the effects of global change on ecosystem functioning and biodiversity.

### Academic qualification

1986-1992, primary degree  
Doctoral Biology, University of Amsterdam, The Netherlands

1992-1996, higher degree  
PhD Botany, Trinity College, University of Dublin, Ireland

1997-1998  
Higher Diploma in Education (Biology),  
ILO, University of Amsterdam, The Netherlands

## Work experience

- 2012- Post-doctoral research fellowship from Fundação para a Ciência e a Tecnologia (SFRH/BPD/79662/2011)
- 2006-2012 Post-doctoral research fellowship from Fundação para a Ciência e a Tecnologia (SFRH/BPD/26914/2006)
- 1998-2004 Teacher of biology, RSG Enkhuizen, The Netherlands  
Other duties: teacher of mathematics  
coordinator biology program first and second years  
counsellor for first years (age-group 12-13 year)  
project group independent learning  
project group study planners  
nature and environment education coordinator  
IT coordinator biology
- 1997-1998 Development of educational school garden, Zaanlands Lyceum, Zaandam, The Netherlands
- 1992-1996 Supervisor at practical work in biology and botany, Trinity College, University of Dublin, Ireland

## Project participation

Responsible for the management and execution of PTDC/CLI/64480/2006: Climate change and Mediterranean ecosystems - the effect of precipitation variability on the understory of cork oak woodlands. Coordinator: Prof. J.S. Pereira.

Responsible for the management and organization of partner duties of EU 13 – IMECC project: Infrastructure for Measurement of the European Carbon Cycle, 2007-2011.

Participant of CARBOEUROPE-IP, contract GOCECT-2003-505572: Assessment of the European Terrestrial Carbon Balance. Coordinator: Ernst-Detlef Schulze (MPI-BGC).

Participant of ESPACE: project 2 – GRASS, contract EV5V-CT93-0292: European Stress Physiology and Climate Experiment. Coordinator: Prof. M.B. Jones.

Participant of ENRICH: European Network of Research on the Impact of CO<sub>2</sub> on Herbaceous Crops, funded under EPOCH: A European Community Research and Development Programme on Climatology and Natural Hazards. Coordinator: Prof. M.B. Jones.

## Publications

### PhD Thesis

**Jongen M** (1996) The effect of elevated atmospheric carbon dioxide on pasture species. Trinity College, University of Dublin, Ireland.

### Scientific papers

**Jongen M**, Hellmann C, Unger S (2015) Species-specific adaptations explain resilience of herbaceous understorey to increased precipitation variability in a Mediterranean oak woodland. *Ecology & Evolution* **5**: 4246-4262.

**Jongen M**, Unger S, Pereira JS (2014) Effects of precipitation variability on carbon and water fluxes in the understorey of a nitrogen limited montado ecosystem. *Oecologia* **176**: 1199-1212.

Unger S, **Jongen M** (2014) Consequences of changing precipitation patterns for ecosystem functioning in grasslands: a review. *Progress in Botany* **76**: 347-393.

**Jongen M**, Lecomte X, Unger S, Pintó-Marijuan M, Pereira JS (2013) The impact of changes in the timing of precipitation on the herbaceous understorey of Mediterranean oak woodlands. *Agriculture Forest Meteorology* **171-172**: 163-173.

**Jongen M**, Lecomte X, Unger S, Fangueiro D, Pereira JS (2013) Precipitation variability does not affect soil respiration and nitrogen dynamics in the understorey of a Mediterranean oak woodland. *Plant and Soil* **372**: 235-251.

**Jongen M**, Unger S, Fangueiro D, Cerasoli S, Silva JMN, Pereira JS (2013) Resilience of montado understorey to experimental precipitation variability fails under severe natural drought. *Agriculture Ecosystems and Environment* **178**: 18-30.

Correia AC, Minnuno F, Caldeira MC, Banza J, Mateus J, Carneiro M, Wingate L, Shvaleva A, Ramos A, Bugalho NM, **Jongen M**, Nogueira C, Lecomte X, Pereira JS (2012) Soil water availability strongly modulates soil CO<sub>2</sub> efflux in different Mediterranean ecosystems: models calibration using the Bayesian approach. *Agriculture, Ecosystems and Environment* **161**: 88-100.

**Jongen M**, Pereira JS, Aires LM, Pio CA (2011) The effects of drought and timing of precipitation on the inter-annual variation in ecosystem-atmosphere exchange in a Mediterranean grassland. *Agricultural and Forest Meteorology* **151**: 595-606.

Yi C, Ricciuto D, Li R, Wolbeck J, Xu X, Nilsson M, **Jongen M**, et al. (2010) Climate control of terrestrial carbon exchange across biomes and continents, *Environmental Research Letters* **5**, doi: 10.1088/1748-9326/5/3/034007.

**Jongen M**, Jones MB (1998) Effects of elevated CO<sub>2</sub> on plant biomass production and competition in a simulated neutral grassland community. *Annals of Botany* **82**:111-123.

**Jongen M**, Jones MB (1997) The effects of elevated CO<sub>2</sub> species co-occurring in a neutral grassland. *Abstracta Botanica* **21**: 249-260.

**Jongen M**, Fay P, Jones MB (1996) Effects of elevated CO<sub>2</sub> and arbuscular mycorrhizal infection on *Trifolium repens* L. *New Phytologist* **132**: 425-433.

Jones MB, **Jongen M**, Garvey L, Baxter R (1996) The physiological responses of a European grassland species to elevated CO<sub>2</sub>. *Aspects of Applied Biology* **45**: 155-161.

Jones MB, **Jongen M**, Doyle T (1996) Effects of elevated carbon dioxide concentrations on agricultural grassland production. *Agriculture and Forest Meteorology* **79**: 243-252.

Jones MB, **Jongen M** (1996) Sensitivity of temperate grasslands to elevated CO<sub>2</sub> and the interaction with temperature and water stress. *Agricultural and Food Science in Finland* **5**: 271 - 283.

**Jongen M**, Jones MB, Hebeisen T, Blum H, Hendrey G (1995) The effects of elevated CO<sub>2</sub> concentrations on the root growth of *Lolium perenne* and *Trifolium repens* grown in a FACE system. *Global Change Biology* **1**: 361-371.

Musgrave A., Kuin H, **Jongen M**, de Wildt P, Schuring F, Klerk H, van den Ende H (1992) Ethanol stimulates phospholipid turnover and inositol(1,4,5)trisphosphate production in *Chlamydomonas eugametos* gametes. *Planta* **186**: 442-449.

#### Chapter is books

**Jongen M**, Fay P, Jones MB (1997) The effects of elevated CO<sub>2</sub> on growth and mycorrhizal infection of grass (*Lolium perenne*) and clover (*Trifolium repens*). In: *Global Change and the Irish Environment*, ed. J. Sweeney. Royal Irish Academy, Dublin, pp. 56-68.

Jones MB, **Jongen M** (1996) The effects of increasing CO<sub>2</sub> and climate change on European grasslands. In: *Global Change and the Irish Environment*, ed. J. Sweeney. Royal Irish Academy, Dublin, pp. 46-55.

#### Poster presentations (2007 onwards)

Proença V, Teixeira RFM, **Jongen M**, Domingos T (2015) Land sharing for land sparing: The case of sown biodiverse pastures in Mediterranean ecosystems. ICCB-ECCB 2015, 2-6 August, Montpellier, France.

**Jongen M**, Unger S (2014) Wintertime drought in the Iberian peninsula: effects on grassland productivity and functioning. MEDECOS XIII conference, 6-9 October, Olmué, Chile.

**Jongen M**, Unger S, Lecomte X, Ramos A, Pereira JS (2012) Machoqueira do Grou: changes in understorey productivity and species composition after re-seeding. FICOR, 24-27 May, Coruche, Portugal.

**Jongen M**, Lecomte X, Unger S, Pereira JS (2012) The impact of changes in the amount and timing of precipitation on the herbaceous understorey of Mediterranean evergreen oak woodlands. FICOR, 24-27 May, Coruche, Portugal.

Pintó-Marijuan M, **Jongen M**, Bicho C, Brossa R, Lecomte X, Pereira JS, Chaves MM (2012) Ecophysiological adaptations of the herbaceous understorey of Mediterranean evergreen oak woodlands to different frequencies of precipitation. Ecophysiology Techniques Workshop, 10-15 September, Lisbon, Portugal.

**Jongen M**, Lecomte X, Pereira, JS (2010) The impact of changes in the amount and timing of precipitation on the herbaceous understorey of Mediterranean evergreen oak woodland, European Geosciences Union General Assembly, 2-7 May, Vienna, Austria.

Costa e Silva F, **Jongen M**, Ramos A, Lecomte X, Pereira JS (2010) LTER Machoquiera do Grou, a unique cork oak woodland in Portugal. IMECC meeting, 17-19 February, London, UK.

**Jongen M**, Aires LM, Pio CA, Pereira JS (2009) Carbon fluxes in a Mediterranean grassland: variables controlling net ecosystem exchange. IMECC conference, 26-30 January, Geneva, Switzerland.

Pereira JS, **Jongen M**, Costa e Silva F (2009) When you are enjoying your glass of wine, do you consider carbon sequestration in cork oak forests in Portugal? IMECC conference, 26-30 January, Geneva, Switzerland.

Correia AC, Abrantes M, Banza J, Bugalho M, Caldeira MC, Carneiro M, **Jongen M**, Lecomte X, Lobo-do-Vale R, Mateus J, Nogueira C, Pita G, Ramos ML, Shvaleva A, Wingate L, Pereira JS (2009) Respiração do solo em ecossistemas mediterrânicos: importância para o ciclo do carbono. 6º Congresso Florestal Nacional, 6-9 October, Ponta Delgada, Portugal.

**Jongen M**, Aires LM, Pio CA, Pereira JS (2008) Carbon sequestration capacity of a Mediterranean grassland ecosystem, 11 Encontro Nacional de Ecologia, 20-22 November, Vila Real, Portugal.

**Jongen M**, Aires LM, Pio CA, Pereira JS (2008) Interannual rainfall variability effects on carbon sequestration capacity of a Mediterranean grassland ecosystem, European Geosciences Union General Assembly, 13-18 April, Vienna, Austria.

Jongen M, Aires LM, Pio CA, Pereira JS (2008) Carbon sequestration capacity of a Mediterranean grassland ecosystem: effects of precipitation and management practices. IMECC conference, 3-5 March, Jena, Germany.

Jongen M, Pereira JS (2007) A comparison of sampling methods to assess species composition and productivity in an herbaceous understory in cork oak woodlands. MEDECOS XI Conference, 2-5 September, Perth, Australia.

Oral presentations

Unger S, **Jongen M** (2015) Changing rainfall regimes across global grasslands – A review of consequences on ecosystem functioning. GfÖ 45th annual meeting, 31 August – 4 September, Göttingen, Germany.

**Jongen M**, Unger S, Pereira JS (2014) Consequences of changing precipitation patterns for ecosystem functioning of Mediterranean grasslands. MEDECOS XIII conference, 6-9 October, Olmué, Chile.

**Jongen M**, Unger S, Pereira JS (2013) The impact of changes in the timing of precipitation on the herbaceous understory of Mediterranean evergreen oak woodlands. 4 October, University of Bielefeld, Germany.

Unger S, Fanguero D, Pereira JS, **Jongen M** (2013) Effects of drying wetting cycles on soil and plant C and N dynamics. 43<sup>rd</sup> Annual Meeting of the Ecological Society of Germany, Austria and Switzerland, 9-13 September, Potsdam, Germany.

**Jongen M**, Unger S, Lecomte X, Pereira JS (2012) The impact of changes in the timing of precipitation on the herbaceous understory of Mediterranean evergreen oak woodlands. 97th annual meeting ESA, 5-10 August, Portland, USA.

Unger S, Lecomte X, Pereira JS, Fanguero D, **Jongen M** (2012) The impact of changes in the timing of precipitation on soil respiration and soil-N in Mediterranean evergreen oak woodlands – 97th annual meeting ESA, 5-10 August, Portland, USA.

**Jongen M**, Lecomte X,, Pintó-Marijuan M, Pereira JS (2011) The impact of changes in the timing of precipitation on the herbaceous understory of Mediterranean evergreen oak woodlands. MEDECOS XII Conference, 6-9 September, Los Angeles, USA.

**Jongen M**, Aires L, Pio C, Pereira JS (2010) The effects of drought and timing of precipitation on the inter-annual variation in ecosystem-atmosphere exchange in a Mediterranean grassland. 24 February, Centro de Estudos Florestal, Instituto Superior de Agronomia, Lisbon, Portugal.

**Jongen M**, Caldeira MC, Pereira JS (2009) The effect of drought and subsequent precipitation pulse on productivity, species composition, and carbon fluxes of the herbaceous understory in a cork oak woodland. 94th Ecological Society of America Annual Meeting, 2-7 August, Albuquerque, USA.

**Jongen M**, Caldeira MC, Pereira JS (2008) The effect of precipitation variability on productivity, species composition and carbon fluxes of the herbaceous understory in a cork oak woodland. 11 Encontro Nacional de Ecologia, 20-22 November, Vila Real, Portugal.

**Jongen M**, Jones MB (1996) The effect of elevated atmospheric CO<sub>2</sub> on plant competition in a neutral Leinster grassland. Society of Experimental Biology Annual Meeting, 24-29 March, Lancaster, UK.

**Jongen M**, Fay P, Jones MB (1995) The effects of elevated CO<sub>2</sub> on growth and mycorrhizal infection of grass and clover. Resource capture and processing, 5th workshop of the ESF network on whole plant physiology, 4-7 October, Ballyvaughan, Ireland.

**Jongen M**, Fay P, Jones MB (1995) The effects of elevated CO<sub>2</sub> on growth and mycorrhizal infection of grass and clover. International Geosphere-Biosphere Programme, September, St. Patrick's College, Maynooth, Ireland.

**Jongen M**, Jones MB (1995) Effects of elevated CO<sub>2</sub> on species co-occurring in a neutral grassland. Grassland ecology and ecophysiology under elevated atmospheric CO<sub>2</sub> and temperature, 7th European Ecological Congress, 20-25 August, Budapest, Hungary.

**Jongen M**, Jones MB (1995) The effects of elevated CO<sub>2</sub> on plant competition in a neutral grassland. Effect of atmospheric CO<sub>2</sub>-increase on carbon fluxes in grassland ecosystems, COST Action 619, 8-10 March, Wageningen, The Netherlands.

**Jongen M**, Jones MB (1995) The effect of elevated CO<sub>2</sub> on the root growth of *Lolium perenne* and *Trifolium repens* in a FACE experiment. ETH FACE workshop, 2-3 February, Zurich, Switzerland.

**Jongen M**, Jones MB (1994) The effect of elevated CO<sub>2</sub> on root growth in *Lolium perenne* and *Trifolium repens* in a FACE experiment. Allocation of carbon and nutrients: mechanism and consequences at the whole plant level: 4th workshop of the ESF network on whole plant physiology, 14-16 December, Utrecht, The Netherlands.

**Jongen M**, Jones MB (1994) The effect of elevated CO<sub>2</sub> on root growth in *Lolium perenne* and *Trifolium repens* in a FACE system. Proceedings of the Irish Botanists' Meeting, 29-31 March, University of Ulster, Coleraine, Northern Ireland.

