

Dr. SACCONE Patrick, PhD. in Ecology



PERSONAL INFORMATION

Name: Patrick Saccone

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RESEARCH

I am a plant ecologist investigating the relative influence of local interactions on the ecosystem responses to a changing environment. With plant communities as an ecosystem entrance and field experiment in severe environments as a central approach, I am participating in the scrutiny of the processes underlying the structure and dynamics of communities. Considering the inter-compartment connectivity of the processes and their spatiotemporal variability, I aim at favouring an integrative approach in ecology.

RESEARCH EXPERIENCE

2020-Present: Academy Scientist, **GLORIA Coordination Team, OeAW**, Austria

- GLORIA: GLObal Observation Research Initiative in Alpine environments (Leader: H. Pauli)

2017-2019: Postdoctoral Researcher, **Centre for Polar Ecology, University of South Bohemia**, Czech republic

- TRAPA: Multi-trophic functional integration of C sequestration in High Arctic Soils (P.I.: P. Macek & F. de Bello)

2012-2016: Postdoctoral Researcher, **Department of Ecology, University of Oulu**, Finland

- DeVeSh: Decadal time-scale vegetation shifts at high latitudes: causes & consequences (P.I.: R. Virtanen)

2007-2012: Associate & Postdoctoral Researcher **LECA, CNRS-University of Grenoble & CREA**, Chamonix, France

- PhenoAlp: Plant phenology in alpine areas (P.I.: U. Morra di Cella, E. Cremonese & A. Delestrade)

- VALIDATE: Effects of drought and heatwave on subalpine meadows (P.I.: J.F. Soussana & S. Lavorel)

- NEVE: Interactions across the Atmosphere-Snow-Plant-Soil continuum (P.I.: J.C. Clément, F. Domine, S. Morin & P. Saccone)

- ECOVER: Structuring of communities associated to cushion plants on high mountain cliffs (P.I.: C. Albert, S. Ibanez, S. Lavergne & P. Saccone)

- BIOCATCH: Effects of subalpine meadows on water balance in a global change context (P.I.: J.C. Clément)

- Guisane 2080: Alpine plant distribution and functional variability of the community (P.I.: W. Thuiller)

1999-2001: Research assistant (Overwinter) **French Polar Institute, CNRS-University of Rennes**, France

- BIOSOL: Human and Climate effects on the terrestrial biodiversity of French Subantarctic Islands (P.I.: Y. Frenot)

AREAS OF EXPERTISE

Community Ecology	Biogeochemistry	Climate changes	Manipulative experiment
Functional Ecology	Winter Ecology	Biological invasions	Botany
Plant-Plant interactions	Cold environments	Land-use legacy	Statistical analyses
Plant-Soil interactions			Data management

TEACHING

My philosophy of teaching is inspired by my experience as a student, advice from senior teachers and my first experience as a teacher and supervisor. Along with the basic knowledge, advanced concepts and theories in biology and ecology, I aim at teaching scientific methods, strictness as well as independent thinking and perspective. As a supervisor, I aim at guiding the first scientific steps of undergraduate students and advising graduate students in the development of their scientific autonomy.

TEACHING AND SUPERVISING EXPERIENCE

From 2002 to 2010 I taught at the University of Grenoble as an assistant lecturer and lecturer. I taught at varying levels in Bachelor and Master Programs to students from varying horizons (general biology, ecology, pharmacy, environmental health, pedagogical studies) with varying implications levels from occasional assistance to new program leading. Later in Oulu and South Bohemia Universities I proposed R tutorial to graduate school and guide part of the Polar Ecology excursion on Svalbard respectively.

SUPERVISING EXPERIENCE

From 2003 to 2020, I co-mentored 3 PhD students and supervised or co-supervised 18 students, including 13 Master students, from the Universities of Grenoble, Aix-Marseille, Oulu, and BOKU (Vienna), the French Horticulture Institute of Angers and the French Forestry Institute of Nancy.

EDUCATION

2003- 2007: PhD in Ecology, CEMAGREF and University of Grenoble

Role of plant interactions and place of exploitative competitor species in forest dynamics under global changes: mountain and riparian cases. Supervised by J.J. Brun and R. Michalet

- INVABIO: Comparison of invasion processes between Rhône and Garonne floodplains

- CONTRACER: Rhône riverbank vulnerability to *Acer negundo* invasion

1999-2002: M.S. in Ecosystem and Population Biology, University of Montpellier II & in **Environmental Biosciences**, University of Aix-Marseille III.

Thesis 3: *Experimental and functional approaches of floristic differences between calcareous and siliceous substrates in subalpine grasslands in the French Alps.* Advised by R. Michalet (University of Grenoble)

Thesis 2: *Ecology of Eryngium alpinum (Apiaceae) in the Ecrins mountain range (Southern French Alps).* Advised by I. Till-Bottraud (University of Grenoble)

Thesis 1: *Consequences of charcoal production on Quercus ilex forest dynamic of Gardon massif.* Advised by J-L Vernet (University of Montpellier II) & L. Zeraïa (French Forestry Institute)

1998: B.S. in Organisms and Populations Biology, University of Bordeaux I

Thesis: *Physiological consequences of progressive dry stress on Pinus pinaster saplings.* Advised by A. Queyrens, INRA

FELLOWSHIPS AND AWARDS

2009-2010: Alpine Ecology Laboratory, Research Group Interface Projects: NEVE: Interactions across the Atmosphere-Snow-Plant-Soil continuum. 10 000 €

2009-2010: Alpine Ecology Laboratory, Research Group Interface Projects: ECOVER: Structuring of communities associated to cushion plants on high mountain cliffs. 10 000 €

2004-2006: Isere local council, 'Biodiversity' fund award: CONTRACER: Rhône riverbank vulnerability to *Acer negundo* invasion. 12 000 €

2002-2006: Cemagref Institute, PhD Fellowship. 60 000 €

ADMINISTRATIVE ACTIVITIES

SCIENTIFIC ASSESSMENT

- Evaluator for the European Program ExpeER (<http://www.expeeronline.eu/>).

- Reviewer for Biogeochemistry, Biogeosciences, Ecography, Ecology, Ecology & Evolution, European Journal of Soil Biology, Functional Ecology, Geoderma, International Journal of Agricultural Sciences, Journal of Arid Environments, Journal of Plant Ecology, Journal of Vegetation Science, Naturwissenschaften, New Phytologist, Oikos, Perspectives in Plant Ecology, Evolution and Systematics, Plant Biology, Plant Ecology, Plant & Soil, PlosOne, Polar Science, Polish Polar Research Journal, Science of the Total Environment, Scientific Reports, Soil Biology & Biochemistry.

INSTITUTIONAL RESPONSIBILITIES

2018: Member of the managing team of Nostoc-Czech Field Research Station, Svalbard

2015: Co-organizer of the 19th Kaamos Symposium, 7-8 Dec., Oulu, Finland.

2010: Co-organizer of the report meeting of the European Program PhenoAlp, 29th Nov. 2010, Chamonix, France

2009-2011: Co-leader and field manager of the multidisciplinary ECOVER and NEVE Projects

2007-2009: Manager of the Field Alpine Station of the University of Grenoble

OTHER SKILLS AND ACTIVITIES

Languages: French (mother tongue), English (fluent), Spanish (scholar level), Finnish (beginner), Czech (beginner), German (beginner)

Certifications: Ski-mountaineering (2007) and climbing (1999) instructor; Recreation Leader Certificate (1996); French Driver's License (1994); First Aid Certificate (1994).

Activities: Ski touring, mountaineering and rock climbing.

RESEARCH STATEMENT

My research embraces the integrative aspect of Ecology combining the synthetic conceptualisation of the response-effect model (Lavorel & Garnier 2002, *Funct. Ecol.*) with the holistic visions of the 'integrative community' (Lortie et al. 2004, *Oikos*) and of 'working mechanism in a spatiotemporal mosaic' (Watt 1947, *J. Ecol.*). The statement that experiment is 'an essential approach[...] to even understand cause-and-effect relations in ecology' (Tilman 1989, eds Lickens) also shapes my research: field experiment constitutes a corner stone of my exploration of the complex web of direct, indirect and feedback mechanisms with a particular focus on plant communities in cold ecosystems. Finally, my research navigates in the large ranges of spatiotemporal scales and approaches developed in Ecology to **address the mediating role of local processes in the ecosystems' responses to the changing environment.**

A focus on plant interactions during my PhD highlighted the context and species dependence of their relative importance for the forest responses to environmental changes. A transplant-removal experiment evidenced the buffering or amplification of the effects of the 2003 European heatwave on the regeneration niche by adult canopy depending on species and soil conditions (Saccone et al. 2009). In a floodplain forest, a similar design underlined the role of indirect facilitation for biological invasion by *Acer negundo* (Saccone et al. 2010a). On the other hand, this invasive species have been shown to challenge the survival-growth trade-off largely accepted in forest science (Saccone et al. 2010b). Questioning the characterization of plant strategies, this result is an invitation to improve the functional classifications that fruitfully model the place of biotic communities in the functioning of the ecosystem. Similarly, a decadal design in subarctic tundra showed that the traditional segregation into evergreen and deciduous dwarf shrub can hide species-specific behaviours of interest (Saccone et al. 2017). Even at the species level, a focus at the local scale revealed that intraspecific variability merits attention in regards to interspecific comparison and response to environmental changes (Albert et al. 2010, Steffens et al. in prep.).

I brought back from the subantarctic Kerguelen island first evidence of the interplay between different facets of the environmental changes. The model of the larvae cycle of the introduced fly *Calliphora vicina* showed that recent climate warming allowed the establishment of the species and its current invasion of the island (Frenot et al. 2005). In more temperate areas, land-use adds a complexity to our understanding. For instance, the concepts of biological inertia and land-use legacy were necessary lights to explain the counter-intuitive increase of biotic containment of *A. negundo* with conditions harshness on the Rhone floodplain (Saccone et al. 2013a). In the subalpine grasslands, a large mesocosm transplant design demonstrated the current indenture of soil biogeochemistry to half-century past agro-pastoral practices (Saccone et al. in prep). On the other hand, a climate manipulation indicated that the management of these grasslands by mowing practice could be jeopardize by extreme drought (Benot et al. 2013), even though they showed apparent resistance to heatwave (Benot et al. 2014). In any case, the ecosystem's trajectories are hardly predictable from pulse effects of joint drivers. The retrospective analyses of a long-term transplant experiment successfully associated the functional divergence of heath tundra communities toward alternative states to the interplay between environmental perturbation, grazing pressure and soil wetness (Saccone et al. 2014). However, 'joint effect' does not mean necessarily synchronicity: neither the species and communities respond necessarily to the multiple drivers homogeneously, nor the drivers operate simultaneously (Saccone & Virtanen 2016, Eskelinen et al. 2017). Combining multiple drivers and multiple time scale, even medium-term monitoring of the dynamic is a poor predictor of the long-term response of the community. Actually, the importance of long-term monitoring for our understanding of communities to current changes is the core of the GLORIA program I recently joined.

In the development of community ecology, the shift from taxonomic focuses to process-oriented perspective accompanied the emergence of the functional approach toward a better integration of the different compartments of the ecosystem interacting at the local scale. At the edge of severity gradient, as on high mountain cliffs, the engineer role of cushion plants is enhance by the constraints and then enlightens some of the shade around relations between above and belowground communities (Roy et al. 2013, 2018). A focus on subnival litter decomposition revealed, on the one hand, the importance of temporal and physical dimensions of the snowpack for cold areas biogeochemical activities (Saccone et al. 2013b) while the record of higher microbial activity under less protective snowpack (Jusselme et al. 2016) emphasizes the idea of the multi-modal response of the ecosystem. The need for more integrative perspective motivated my research with the Czech Centre for Polar Ecology on the multi-trophic interactions associated to the C sequestration in High Arctic soils (Jílková et al. submitted).

My early career has been a journey in diverse research groups and ecological systems to extend my research from a focus on plant interactions toward better integration of the inter-compartment connectivity and spatiotemporal variability of local processes. Although the diverse results raised more questions than answers, they also drew future directions around 2 convictions: First, the better integration of the diverse aspects of ecological processes needs more collaboration among fields, disciplines, and approaches of ecology to deepen our understanding of ecosystem functioning. Second, a larger consideration of the diversity of the mechanisms potentially mitigating the ecosystems' responses to environmental changes will improve our capabilities to model the processes.

TEACHING STATEMENT

PHILOSOPHY OF TEACHING

In substance, my philosophy of teaching is about **approaching the right balances**. As a regular teacher at the University of Grenoble and more occasional at the Universities of Oulu and South Bohemia, and as supervisor of about 20 students from varying horizons and levels, I am using my experience as students and advices from senior teacher and colleague to adjust my teaching balance.

My professor in Population Biology at the University of Bordeaux remarkably demonstrated that **teaching is not only transmitting knowledge**, but it is also, and perhaps more importantly, about presenting methods, context, perspective, and how to use this knowledge to build our own way to think. My experience outside the academia as climbing and ski-mountaineering instructor confirms the importance of such balance guide people toward safe autonomy. Tracing the history of the science of Evolution, this professor perfectly reflects the application Socratic paradox 'I know that I know nothing' in science: **science is not dogma** and the provisional character of scientific theories are essential elements of teaching. I applied the idea for instance in course on biological invasions where I present the terminology as a chosen alternative and the theories about involved mechanisms as potential processes. Finally, as this same professor was using his theatrical experience to maintain students' interest, I know that **teaching includes a part of entertainment**. Practically, personal photos of Kerguelen subantarctic Island in a lecture on biological invasion uses the imaginary power of illustrative examples to favour the students' attention as direct interaction with them shapes the class rhythm.

With experience, I realized that **teaching is two-way learning** where the feedback from the students improves the teaching. The need for reminders of basic method from the 1st-year students for instance invited me to consider my teaching through the Aristotle's Rhetorical Triangle where the adjustment of the speech makes the message gets the students' audience. I also experienced the **complementarity of teaching formats** preparing a community ecology program where the concepts presented in the lecture were illustrated during study case exercise in tutorials.

Along my supervising experience in vegetation ecology, I completed my mentoring activity in the recent few years in an 'horizontal mentoring' where my 'junior scientist' status open the opportunity to share my experience with graduate students and young researchers in diverse fields of scientific method or academic life.

TEACHING EXPERIENCE

2018 (3 days): Bachelor to Graduate: Polar Ecology excursion on Svalbard

2016 (3 hours): Graduate school: R tutorial, Data management

2010 (10 hours): Bachelor: Tutorials in Ecology

2006-2007 (96 hours): Bachelor to Graduate in Pharmacy: Lectures and Practical works in Ecology, Mycology and Plant Histology

2003 to 2006 (80 hours/year) : Bachelor and Master : Lectures, Tutorials, Practical works and Field excursions: Ecology, Plant biology and introduction to biology

SUPERVISING EXPERIENCE

2020: Steffens M.J., Master BOKU, Vienna

2012-19: Maliniemi T., PhD (co-mentoring), Oulu Univ.

2013: Traclet S., Master, Oulu Univ.

2011-15: Roy J., PhD (co-mentoring), Grenoble Univ.

2010: Delorme S., Master, Grenoble Univ.

2009: Colomb C. and Delorme S., Master, Grenoble Univ.; Reydet E., Master, Horticulture National Institute

2007-09: Albert C., PhD (co-mentoring), Grenoble Univ.

2008: Faure M. and Fourel G., Master, Grenoble Univ.; Piseri B., Bachelor, Grenoble Univ.

2005: Duret B., Bachelor, Marseille Univ.; Gubry N., Master, Grenoble Univ.

2004: Duhéron E., Bachelor, Forestry National School; Cédileau S. and Caillette M., Bachelor, Grenoble Univ.; Combet F., Master, Grenoble Univ.

2003: Viard-Cretat F., Master, Grenoble Univ.; De La Forest Divonne E., Licence, Grenoble Univ.

- 22- Roy J., Bonneville J.M., **Saccone P.**, Ibanez S., Albert H. C., Boleda M., Gueguen M., Ohlman M., Rioux D., Clément J.C., Lavergne S. & Geremia R. (2018) Differences in the fungal communities nursed by two genetic groups of the alpine cushion plant, *Silene acaulis*. *Ecology and Evolution*, 8: 11568-11581 [pdf](#)
- 21- Maliniemi T., Kapfer J., **Saccone P.**, Skog A. & Virtanen R. (2018) Long-term vegetation changes of treeless heath communities in northern Fennoscandia: Links to climate change trends and reindeer grazing. *Journal of Vegetation Science*, 29: 469-479 [pdf](#)
- 20- **Saccone P.**, Hoikka K. & Virtanen R. (2017) What if plant functional types conceal species-specific responses to environment? Study on arctic dwarf shrub communities. *Ecology*, 98: 1600-1612 [pdf](#)
- 19- Eskelinen A., **Saccone P.**, Spasojevic M. J. & Virtanen R. (2016) Herbivory mediates the long-term shift in the relative importance of microsite and propagule limitation. *Journal of Ecology*, 104: 1326-1334 [pdf](#)
- 18- Jusselme M.D., **Saccone P.**, Zinger L., Faure M., Guillaumaud N., Clément J.C. & Poly F. (2016) Variations in snow depth modify N-related soil microbial abundances and functioning during winter in subalpine grassland. *Soil Biology and Biochemistry*, 92: 27-37 [pdf](#)
- 17- **Saccone P.** & Virtanen R. (2016) Extrapolating multi-decadal plant community changes based on medium-term experiments can be risky: evidence from high-latitude tundra. *Oikos*, 125: 76-85 [pdf](#) [[recommended in F1000Prime](#)]
- 16- Obojes N., Bahn M., Tasser E., Walde J., Inauen N., Hiltbrunner E., **Saccone P.**, Lochet J., Clément J.C., Lavorel S., Tappeiner U. & Körner C. (2015) Vegetation effects on the water balance of mountain grasslands depend on climatic conditions. *Ecohydrology*, 8: 552-569 [pdf](#)
- 15- **Saccone P.**, Pyykkonen T., Eskelinen A. & Virtanen R. (2014) Environmental perturbation, grazing pressure and soil wetness jointly drive mountain tundra toward alternative states. *Journal of Ecology*, 102: 1661-1672 [pdf](#)
- 14- Benot M.L., **Saccone P.**, Pautrat E., Vicente R., Colace M.P., Grigulis K., Clément J.C. & Lavorel S. (2014) Stronger short-term effects of mowing than extreme summer weather on a subalpine grassland. *Ecosystems* 17: 458-472 [pdf](#)
- 13- Benot M.L., **Saccone P.**, Vicente R., Pautrat E., Morvan-Bertrand A., Decau M.L., Grigulis K., Prud'homme M.P. & Lavorel S. (2013) How extreme summer weather may limit control of *Festuca paniculata* by mowing in subalpine grasslands. *Plant Ecology & Diversity* 6: 393-404 [pdf](#)
- 12- Roy J., Albert C.H., Ibanez S., **Saccone P.**, Zinger L., Choler P., Clément J.C., Lavergne S. & Geremia R. (2013) Microbes on the cliff: alpine cushion plants structure bacterial and fungal communities. *Frontiers in Terrestrial Microbiology* 4: 64 [pdf](#)
- 11- **Saccone P.**, Girel J., Pagès J.P., Brun J.J. & Michalet R. (2013a) Ecological resistance to *Acer negundo* invasion in a European riparian forest: relative importance of environmental and biotic drivers. *Applied Vegetation Science* 16: 184-192 [pdf](#)
- 10- **Saccone P.**, Morin S., Baptist F., Bonneville J.M., Colace M.P., Domine F., Faure M., Geremia R., Lochet J., Poly F., Lavorel S. & Clément J.C. (2013b) The effects of snowpack properties and plant strategies on litter decomposition during winter in subalpine meadows. *Plant Soil* 363: 215-229 [pdf](#)
- 9- Clément J.C., Robson M.T., Guillemin R., **Saccone P.**, Lochet J., Aubert S. & Lavorel S. (2012) The effects of snow-N deposition and snowmelt dynamics on soil N-cycling in marginal terraced grasslands in the French Alps. *Biogeochemistry* 108: 297-315 [pdf](#)
- 8- **Saccone P.**, Brun J.J. & Michalet R. (2010b) Challenging growth-survival trade-off: a key for *Acer negundo* invasion in European floodplains? *Canadian Journal Forest Research* 40: 1879-1886 [pdf](#)
- 7- **Saccone P.**, Pagès J.P., Girel J., Brun J.J. & Michalet R. (2010a) *Acer negundo* invasion along a successional gradient: direct facilitation by native pioneers and indirect facilitation by conspecifics. *New Phytologist* 187: 831-842 [pdf](#)
- 6- Albert C.H., Thuiller W., Yoccoz N.G., Soudan A., Boucher F., **Saccone P.** & Lavorel S. (2010) Intraspecific functional variability: extent, structure and sources of variation. *Journal of Ecology* 98: 604-613 [pdf](#)
- 5- **Saccone P.**, Delzon S., Pagès J.P., Brun J.J. & Michalet R. (2009) The role of biotic interactions in altering tree seedling responses to an extreme climate event. *Journal of Vegetation Science* 20: 403-414 [pdf](#)
- 4- Brooker R.W., Maestre F., Callaway R.M., Lortie C.L., Cavieres L.A., Kunstler G., Liancourt P., Tielbörger K., Travis J.M., Anthelme F., Armas C., Coll L., Corcket E., Delzon S., Forey E., Kikvidze Z., Olofsson J., Pugnaire F., Quiroz C.L., **Saccone P.**, Schiffer K., Seifan M., Touzard B. & Michalet R. (2008). Facilitation in plant communities: the past, the present and the future. *Journal of Ecology* 96: 18-34 [pdf](#)
- 3- Michalet R., Pagès J.P., **Saccone P.** & Brun J.J. (2008) Les interactions entre espèces d'arbres dans les mélanges illustrées par le cas des feuillus et des conifères dans les forêts de montagnes. *Revue Forestière Française* 60: 139-153 [pdf](#)

SYMPOSIUM PROCEEDINGS

- 2- **Saccone P.**, Brun J.J., Pagès J.P. & Michalet R. (2003) Installation et maintien d'espèces forestières feuillues dans les paysages agricoles en déprise: Approche expérimentale de l'importance des facteurs environnementaux. *Proceeding of IALE France Symposium*, Gap, 8-10 Oct. 2003, pp. 123-129 [pdf](#)
- 1- Hullé M., Pannetier D., Maurice D., Courmont L., Chaillon C., Chaillon P.E., **Saccone P.**, Hébert C., Gracia M., Buffin J., Simon J.C. & Frenot Y. (2003) Aphids from Kerguelen and Crozet Islands, Subantarctic. *In Antarctic Biology in a Global Context*. Huiskes A.H.L. Gieskes W.W.C. Rozema J. Schorno R.M.L. van der Vies S.M. Wolf W.J. (Eds) Backhuys Publishers Leiden the Netherlands, pp. 308-312 [pdf](#)

SUBMITTED AND IN PREPARATION MANUSCRIPTS

- Steffens M.J., **Saccone P.**, Steinbauer K. & Winkler M. Intraspecific Functional Trait Variation in *Carex firma* and *Dryas octopetala* along an Elevation Gradient.
- Jílková V., Devetter M., Bryndová M., Hájek T., Kotas P., Luláková P., Meador T., Navrátilová D., **Saccone P.** & Macek P. Soil organic carbon sequestration related to soil physical and chemical properties in the high Arctic (Submitted to *Global Biogeochemical Cycles*)
- Saccone P.**, de Bello F., Hájek T. & Macek P. The functional diversity at the edge of environmental constraints is driven by species turnover rather than intraspecific variability
- Saccone P.** & Virtanen R. Contrasted responses of widespread heath communities to novel environments: functional assembly history also matters.
- Saccone P.**, Lochet J., Delorme S., Jones H., Lavorel S. & Clément J.C. Past land-use and simulated future climate jointly drive the quantity and quality of leachates through subalpine grasslands.
- Maliniemi T., Kapfer J., **Saccone P.**, Skog A. & Virtanen R. Long-term homogenization of the Northern Fennoscandian Vegetation: What the heath β -diversity is telling?

INVITED SEMINARS

- 2- Toward an integrative approach in Community Ecology. Department of Ecology and Evolution, Tübingen University, 25-26 Nov. 2019, Tübingen, Germany
- 1-The Future of Ecology. Department of Natural Sciences and Environmental Health, University of South-Eastern Norway, 26 Aug. 2019, Bø, Norway

CONFERENCE TALKS

- 20- **Saccone P.**, Bernardová A., Bryndová M., de Bello F., Devetter M., Hájek T., Háněš L., Jílková V., Kotas P., Macková J., Polická P., Starý J. & Macek P. (2018) Linking C Sequestration Service and High Arctic ecosystem multi-trophic functionality. *SFécologie 2018*, 22-25 Oct., Rennes, France
- 19- **Saccone P.** & Virtanen R. (2016) Estimation of the tundra vegetation response to environmental changes: The width of the spatial and time windows matters. *SFécologie2016*, 24-28 Oct., Marseille, France
- 18- **Saccone P.** & Virtanen R. (2016) Relative contributions of plant functional attribute, abiotic, and biotic environments to tundra heath community structuring. *Nordic Oikos meeting*, 2-4 Feb., Turku, Finland
- 17- **Saccone P.** & Virtanen R. (2015) Responses of tundra communities to abiotic and biotic changes: The importance of the temporal dimension. *AGU fall meeting*, 14-18 Dec., San Francisco, USA
- 16- **Saccone P.** & Virtanen R. (2015) Responses of tundra communities to abiotic and biotic changes: The importance of the temporal dimension. *19th Kaamos Symposium*, 7-8 Dec., Oulu, Finland
- 15- **Saccone P.** & Virtanen R. (2015) Responses of tundra and forest heath communities to environmental severity changes: evidence from reciprocal transplantation along an elevation gradient. *58th IAVS symposium*, 19-24 July, Brno, Czech Republic
- 14- **Saccone P.**, Pyykkonen T., Eskelinen A. & Virtanen R. (2013) Long-term mountain tundra dynamics under grazing and environmental changes. *56th IAVS symposium*, 26-30 June, Tartu, Estonia
- 13- **Saccone P.**, Pyykkonen T., Eskelinen A. & Virtanen R. (2013) Long-term responses of mountain tundra vegetation to grazing pressure in the context of environmental changes. *European Geosciences Union (EGU) General Assembly*, 7-12 April, Vienna, Austria
- 12- **Saccone P.** (2012) Plant interactions as a mediator of global change effects on plant communities functioning. *16th Kaamos Symposium*, 11-12 Dec., Oulu, Finland
- 11- Benot M.L., **Saccone P.**, Vicente R., Reydet E., Morvan-Bertrand A., Decau M.L., Grigulis K., Prud'homme M.P. & Lavorel S. (2011) Land-use vs. climate change: do they both represent a threat to subalpine grasslands? A test on the dominant grass *Festuca paniculata*. *12th EEF congress*, 25-29 Sept., Avila, Spain

- 10- **Saccone P.**, Collomb C., Lochet J., Domine F., Maurin S., Lavorel S. & Clément J.C. (2011) Effects of snow depth on the decomposition of litter from contrasted plant species in subalpine meadows. *54th IAVS symposium*, 20-24 June, Lyon, France
- 9- **Saccone P.**, Girel J., Brun J.J. & Michalet R. (2011) *Acer negundo* invasion along a successional gradient: The role of plant interactions. *54th IAVS symposium*, 20-24 June, Lyon, France
- 8- Benot M.L., **Saccone P.**, Grigulis K., Reydet E., Vicente R., Clément J.C. & Lavorel S. (2011) Resistance of a subalpine grassland after two years of seasonal climate change and an extreme event. *54th IAVS symposium*, 20-24 June, Lyon, France
- 7- Obojes N., Bahn M., Tasser E., Inauen N., Hiltbrunner E., **Saccone P.**, Clément J.C., Lavorel S., Tappeiner U. & Körner C. (2010) Plant functional diversity effects on water balance in mountain grasslands across the Alps. *International GMBA-DIVERSITAS conference "Functional significance of mountain biodiversity"*, 27-30 July, Chandolin, Switzerland
- 6- Michalet R., **Saccone P.** & Pagès J.P. (2007) Les interactions entre espèces dans les mélanges illustrées par le cas des feuillus et des conifères dans les forêts de montagnes. *REGFOR*, 26-28 June, Nancy, France
- 5- Michalet R., **Saccone P.** & Brun J.J. (2007) Et si les cibles des expérimentateurs avaient une mémoire? *EcoVeg 3rd symposium*, 14-16 March, Talence, France
- 4- **Saccone P.**, Delzon S., Pagès J.P., Brun J.J. & Michalet R. (2006) The role of biotic interactions in altering tree seedling responses to climatic change events. *ESF Exploratory Workshop: Positive interactions, biodiversity and invasibility in a changing world*, 3-7 Sept., Arcachon, France
- 3- **Saccone P.**, Brun J.J., Pagès J.P. & Michalet R. (2005) Les espèces présentant des stratégies similaires peuvent-elles occuper des places différentes dans les successions végétales? *EcoVeg 1st symposium*, 17-18 Feb., Lyon, France.
- 2- Viard-Cretat F., Pagès J. P. & **Saccone P.** (2004) Changement d'utilisation des terres et paysage: Rôle de la germination et du recrutement dans la dynamique des forêts post-culturelles de l'étage montagnard des Alpes Françaises. *6th Functional Ecology Days*, 10-12 March, Rennes, France
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- 6- Jusselme M.D., Clément J.C., Guillaumaud N., **Saccone P.**, Zinger L., Faure M., Poly F. (2013) Les communautés microbiennes et fonctionnement des sols de prairie subalpine dépendent des variations microclimatiques hivernales imposées par la topographie locale. *VIth AFEM Symposium*, 22-25 Oct., Clermont-Ferrand, France
- 5- **Saccone P.**, Pykkonen T., Eskelinen A. & Virtanen R. (2013) Long-term responses of mountain tundra vegetation to grazing pressure in the context of environmental changes. *European Geosciences Union (EGU) General Assembly*, 7-12 April, Vienna, Austria
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- Saccone P.** (1999) Ecologie d'*Eryngium alpinum* (Apiaceae) dans le vallon du Fournel. Master Thesis 2; Altitude population Biology Research Group, University of Grenoble, 19 p.
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PUBLICATIONS INTEGRATING WORK AS A RESEARCH ASSISTANT AND STUDENT

- **BIOSOL:** Frenot Y., Chown S. L., Whiman J., Selkirk Convey P., Skotnicki M. & Bergstrom D. M. (2005) Biological invasions in the Antarctic: extent, impacts and implications. *Biological Reviews* 80: 45-72.
Frenot Y., Lebouvier M., Chapuis J.L., Gloaguen J.C., Hennion F. & Vernon P. (2006) Impact des changements climatiques et de la fréquentation humaine sur la biodiversité des îles subantarctiques françaises. *Belgeo* 3: 363-372.
- **M.S. Thesis 2:** Gaudeul M. & Till-Bottraud I. (2003) Low selfing in a mass-flowering, endangered perennial, *Eryngium alpinum* L. (Apiaceae). *American Journal of Botany* 90: 716-723.
Gaudeul M. & Till-Bottraud I. (2004) Reproductive ecology of the endangered alpine species *Eryngium alpinum* L. (Apiaceae): Phenology, gene dispersal and reproductive success. *Annals of Botany* 93: 711-721.
- **M.S. Thesis 1:** De Maupéou G. & Zeraia L. (2002) Gestion intégrée de la chênaie verte méditerranéenne: application à deux massifs de la région Languedoc-Roussillon. *Revue forestière française* LIV: 55-66.
- **B.S. Thesis:** Nguyen-Queyrens A., Costa P., Lousteau D. & Plomion C. (2002) Osmotic adjustment in *Pinus pinaster* cuttings in response to a soil drying cycle. *Annals of Forest Science* 59: 795-799

USER AND POPULAR ORIENTED SCIENCE

TV, Radio and Newspaper interviews:

- 2010:** Radio Mont-Blanc: The European Program PhenoAlp ([link](#))
National news broadcast coverage: ECOVER project ([link](#))
- 2009:** National news broadcast coverage: VALIDATE project ([link](#))
- 2003:** 'Dauphiné Libéré' Newspaper, local pages: The field experiment in the mountain site for my PhD

User-Oriented Dissemination

- 2007:** Cemagref Institute Journal: my PhD results for forest managers ([link](#))

Science Popular Meetings

- 2008:** Participation to mountain careers fair in the behalf of the Alpine Ecology Laboratory presenting the ECOVER project and the research carried on in the lab, Fontaine, France
- 2004:** Participation in the local 'Foire aux plants' presenting my PhD plan, St Michel de Maurienne, France

BIBLIOMETRIC INDICATORS

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h-index: 16 ([Google Scholar](#)), 12 ([ISI WoS](#))

Citations: 2637 ([Research Gate](#)), 2508 (Google Scholar), 1686 (ISI WoS -1664 without self-citations)