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# Valentina Ferretti, PhD

Fellow in Decision Science

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<http://www.lse.ac.uk/management/people/vferretti.aspx>

<https://publons.com/author/1328791/valentina-ferretti#profile>

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## Summary bio

**Academic focus.** Dr Valentina Ferretti is a Post-Doctoral Research Fellow in Decision Science in the Department of Management of the London School of Economics and Political Science. She holds a BSc in Environmental Engineering (2006, Politecnico of Torino, Italy), an MSc in Environmental Engineering (with distinction, 2007, Politecnico of Torino and Royal Institute of Technology of Stockholm, Sweden) and a PhD in Decision Analysis (2011, Politecnico of Torino). She obtained the Italian teaching qualification at the level of Associate Professor in January 2015.

Dr Ferretti's areas of expertise focus on two main themes. The first one is Decision Analytics and the modelling of judgments that can be used in public policy making and management contexts. The second one is economic appraisal of policies and environmental impact assessment of projects and programs, paying particular attention to their spatial dimension. From the synergic blend of these two areas, her research interests focus on exploring behavioural issues in spatial decision-making processes and on developing judgement-based analytics for supporting innovative policy design. Dr Ferretti is an **award-winning teacher of Risk and Decision Analysis at LSE**.

**Experience.** Dr Ferretti's research is regularly presented at leading international conferences and has been published in top international journals, such as the European Journal of Operational Research (ABS<sup>1</sup> level 4), Decision Support Systems (ABS level 3), Environmental Modelling and Software, Land Use Policy, Ecological Indicators, to name the most relevant ones, leading to a track record of 37 international publications<sup>2</sup> indexed in the SCOPUS Scientific Database.

One of her papers, concerning the integration of Decision Analysis and Spatial Analysis for locational decisions, was awarded the **Wiley Practice Prize** by the International Society on Multi-Criteria Decision Making in 2011. Her Ph.D. thesis received the **Giorgio Leonardi best Ph.D. thesis award** in 2012 within the XXXIII Annual Scientific Conference of the Italian Association on Regional Sciences. Her most recent research projects, one dealing with the development of a decision aiding tool to support a Foundation providing educational opportunities for underprivileged children, one dealing with the deployment of a multi-methodology intervention to support planning in a new World Heritage site and a third one dealing with the use of Decision Analytics to design and evaluate regeneration strategies for disused railways, have been awarded the first place in the **INFORMS 2017 Decision Analysis Practice Award**, the runner up position for the **INFORMS 2016 Decision Analysis Practice Award** and the second position for the **INFORMS 2017 Innovative Application**

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<sup>1</sup> Association of the Business Schools – ABS- Journal Guide. The Guide classifies journals into four categories (1 to 4) plus a Journal of Distinction category, which recognises the quality of those journals ranked as a 'top' class journal in at least three out of five international listings consulted. Category 4 is the best one.

<sup>2</sup> With an overall number of citations equal to 236 and an h index equal to 8 (source of the data: [www.scopus.com](http://www.scopus.com), accessed on November 21, 2017).

**in Analytics Award**, respectively. The project dealing with the deployment of a multi-methodology intervention to support planning in a new World Heritage site is currently selected as a **semi-finalist for the INFORMS 2018 Innovative Applications in Analytics Award**.

Dr Ferretti holds research visiting positions at the London School of Economics (UK), at the University of Pittsburgh (USA), at the University of Southern California (USA), at the CNRS LAMSADE Laboratory in Paris (France), at the Paul Scherrer Institut (PSI - ETH) in Zurich (Switzerland), at the Faculty of Geo-Information Science and Earth Observation – ITC of the University of Twente in Enschede (The Netherlands), at the Institute of Mathematical Sciences of Madrid (ICMAT, Spain), at the University of Adger (Grimstad, Norway) and at the Systems Analysis Laboratory in Aalto University in Helsinki (Finland). Moreover, Dr Ferretti holds invited teaching positions at the Blavatnik School of Government of the University of Oxford (UK), at Ecole Centrale Paris (France) and at the University of Trento (Italy) and has been invited to **teach masterclasses for the Guardian**<sup>3</sup>.

Finally, Dr Ferretti has supervised many award-winning dissertations of graduate students and is co-supervising Ph.D. students as well.

**Key clients.** By actively collaborating with different research institutes at the international level, Dr Ferretti has experience in applying decision analytics in many fields related to public policy making, including transportation, urban and regional planning, forestry, and cultural heritage management.

Key clients supported so far include: CMS Legal Services EEIG (London, UK), the Csanyi Foundation for underprivileged children (Hungary), the Piedmont Region Authority (Italy), the Transportation Sector of the Piedmont Region Authority (Italy), the Volta Mantovana Municipality (Italy), and the Tourism organization of Alba, Bra, Langhe and Roero (Italy).

**Research interests:** decision modelling and analysis, risk analysis, locational decisions and related cognitive and motivational biases, behavioural decision science, policy analytics.

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<sup>3</sup> <https://www.theguardian.com/guardian-masterclasses/2017/nov/09/how-to-make-better-decisions-lse-fellow-decision-science-dr-valentina-ferretti-life-work-business-management-lifestyle-biases-course>

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## 1 Education

January 2008- March 2011

**PhD** in Decision Analysis and environmental evaluation [field: economic appraisal of policy, plans and programs and project impact assessment procedures], Politecnico of Torino, Italy. Dissertation thesis title: “Multicriteria- Spatial Decision Support Systems (MC-SDSS): towards an integrated approach for sustainability assessments of territorial transformations”.

September 2005- October 2007

**Master of Science in Environmental Engineering.** Politecnico of Torino (Italy) and Royal Institute of Technology of Stockholm (Sweden) (final grade: 110 cum Laude/110). Dissertation thesis title: “The Analytic Network Process for environmental decision making: the case of Turin’s new railway station”

September 2002- March 2006

**Bachelor of Science in Environmental Engineering.** Politecnico of Torino (Italy) (final grade: 108/110). Dissertation thesis title: “The consequences of Turin 2006 Winter Olympic Games: direct survey on the involved municipalities and mapping of the territorial effects”

## 2 Research visiting positions

### USA

University of Southern California, Los Angeles, USA. **Visiting researcher.** May 2017 and April 2015 (scientific coordinator: Professor Detlof von Winterfeldt).

University of Pittsburgh, KATZ School of Business, USA **Invited lecturer.** From September 2013 to October 2013 (scientific coordinator: Professor Thomas Saaty).

### EUROPE

Paul Scherrer Institut (PSI- ETH), Zurich (Switzerland) **Visiting scientist.** Winner of a scientific exchange funded by the Swiss National Science Foundation, November – December 2017 (co-applicant: Dr. Matteo Spada).

Aalto University, Systems Analysis Laboratory, Helsinki (Finland). **Visiting scientist.** Winner of a Short Term Scientific Mission within COST Action IS1304 (Expert Judgment Network: Bridging the Gap Between Scientific Uncertainty and Evidence-Based Decision Making), April 2017 (scientific coordinator: Professor Raimo P. Hämmäläinen).

University of Agder, Kristiansand, (Norway). **Visiting international scholar (invited).** December 2016 (scientific coordinator: Professor Tina Comes).

Instituto de Ciencias Matematicas (ICMAT) Madrid (Spain). **Visiting scientist.** Winner of a Short Term Scientific Mission within COST Action IS1304 (Expert Judgment Network: Bridging the Gap Between Scientific Uncertainty and Evidence-Based Decision Making), October- November 2016 (scientific coordinator: Professor David Rios).

Ecole Centrale, Paris (France). **Invited lecturer.** 2014-2015, 2015-2016, 2016-2017

LAMSADE CNRS Laboratory (Laboratoire d'Analyse et Modélisation de Systemès pour l'Aide à la Decision), Université Paris Dauphine, Paris (France). **Visiting Assistant Professor (invited)** (May 2014 – June 2014) (scientific coordinator: Professor Alexis Tsoukiàs).

London School of Economics and Political Science, London (UK). **Invited researcher** 2013-2014-2015 (scientific coordinator: Dr. Gilberto Montibeller).

Faculty of Geo-Information Science  
and Earth Observation - ITC,  
University of Twente, Enschede  
(The Netherlands).

**Visiting scientist.** Winner of three Short Term Scientific Missions within COST Actions FP1207 (ORCHESTRA) and COST Action FP0804 (FORSYS) (From October 2011 to December 2014, scientific coordinator: Dr. Luc Boerboom).

### 3 Academic career

September 2015 - present

**Post Doc Research Fellow in Decision Science.** Department of Management. London School of Economics and Political Science. London (UK).

July 2011- September 2015

**Post Doc Research Fellow.** Department of Regional and Urban Studies and Planning of the Politecnico of Torino, Italy (scientific coordinator: Professor Giulio Mondini).

2008- 2015

**Collaborator.** Higher Institute on Territorial Systems for Innovation (SiTI; <http://www.siti.polito.it/index.php?l=ENG>), Turin, Italy (scientific coordinator: Professor Giulio Mondini).

February 2010- February 2011

**Junior consultant.** SOGES S.p.A. “Think Tank” project between SOGES and the PhD School of the Technical University of Turin.

## 4 Scientific interests

The research activity of Dr Valentina Ferretti developed through a period of 10 years and focused on the study of decision and risk analysis to support project impact assessment and public policy making in different fields (e.g. transportation, cultural heritage, environmental decision-making, ecology). Dr Valentina Ferretti research expertise focuses on the following three main themes:

(i) **Economic appraisal and projects/policies/programmes impact assessment** (e.g. Environmental Impact Assessment, Strategic Environmental Assessment, Cost Benefit Analysis, State preference methods, Contingent Evaluations, real estate appraisal, Assessment of plans and projects significantly affecting Natura 2000 sites, environmental impact indicators framework as for instance the DPSIR model and the Political Performance Index). These tools have been applied on several projects, dealing with territorial transformations, participatory development of territorial management plans and environmental externalities' assessment.

The most recent developments of this stream of research deal with the design and deployment of multi-methodology interventions (e.g. problem structuring methods combined with spatial analysis, economic analysis and decision analysis) to support planning and management of cultural heritage<sup>4</sup>.

(ii) **Decision Analytics to support policy making and projects' feasibility studies** (i.e. Multi Criteria Decision Analysis, risk analysis, portfolio analysis). The following Multi Criteria Decision Analysis techniques have been studied and applied to challenging societal problems (e.g. urban and rural regeneration interventions): the *Analytic Hierarchy Process* (AHP), the *Analytic Network Process* (ANP), the *Choquet Integral*, *Multi Attribute Value Theory* (MAVT), the *Non Additive Robust Ordinal Regression* (NAROR), *ELimination Et Choix Traduisant la REalité* (ELECTRE) and the *Preference Ranking Organization METHod for Enrichment of Evaluations* (PROMETHEE). These tools have been applied for the evaluation of competing projects at different scales: from the building scale to the urban and territorial one, exploring as well synergies and opportunities for multi-methodology approaches.

The most recent developments of this stream of research deal with the testing of preference learning algorithms for environmental decision-making processes (in collaboration with Ecole Centrale Paris)<sup>5</sup> and with the use of decision analytics to support the innovative design of public policies (in collaboration with the LAMSADE CNRS Laboratory – Université Paris Dauphine)<sup>6</sup>.

(iii) **Spatial Decision Support Processes and related cognitive and motivational biases**. Within this stream of research, the candidate has designed and applied Multicriteria – Spatial Decision Support Systems to deal with locational decisions in different contexts, i.e. from the location of undesirable facilities (e.g. landfills and waste incinerators) to ecological suitability assessments.

The most recent developments of this research stream refer to: (i) the provision and discussion of guidelines for the selection of the appropriate Decision Analysis method to be integrated with Geographic Information Systems according to a prescriptive approach and (ii) the investigation of

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<sup>4</sup> Ferretti V., Gandino E. 2017. Co-designing the solution space for rural regeneration in a new World Heritage site: a Choice Experiments approach. *European Journal of Operational Research*, <https://doi.org/10.1016/j.ejor.2017.10.003>. This project has been awarded the **runner up position for the 2016 INFORMS Decision Analysis Practice Award** and is currently among the **semi-finalists for the INFORMS 2018 Innovative Applications of Analytics Award**.

<sup>5</sup> Ferretti V., Liu J., Mousseau V., Ouerdane W. 2018. Reference-based ranking procedure for environmental decision making: Insights from an ex-post analysis. *Environmental Modelling and Software*, 99: 11-24.

<sup>6</sup> Ferretti V., Pluchinotta I., Tsoukiàs A. Supporting decisions in public policy making processes: generation of alternatives and innovation. *European Journal of Operational Research* (under review – revise and resubmit).



cognitive and motivational biases associated with the use of maps<sup>7</sup> (please, see section 6 in this CV for the list of grants that the candidate has recently received to develop this stream of research).

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<sup>7</sup> Ferretti V., Geneletti D. Does spatial information affect weights elicitation in environmental decision making? Insights from a behavioral experiment. *European Journal of Operational Research* (in progress).

## 5 Research – outputs<sup>8</sup>

### 5.1 Papers under review/ in progress

- **Ferretti V.**, Guney S., Montibeller G., von Winterfeldt D. How to debias overprecision. Target Journal: Management Science (ABS<sup>9</sup> level 4\*, **I.F. 2.822**).
- **Ferretti V.**, Geneletti D. Does spatial information affect weights elicitation in environmental decision making? Insights from a behavioral experiment. Target Journal: European Journal of Operational Research (ABS level 4, **I.F. 3.297**)
- **Ferretti V.**, Grosso R. What to do with abandoned military barracks? A multi-attribute value model to support urban regeneration from multiple perspectives. Target Journal: Landscape and Urban Planning (**I.F. 4.563**).
- Bottero M., **Ferretti V.**, Figueira J.R., Greco S., Roy B. On the Choquet multiple criteria preference aggregation model: theoretical and practical insights from a real-world application. European Journal of Operation Research (ABS level 4, **I.F. 3.297**, under review – revise and resubmit) [authors listed in alphabetical order].
- **Ferretti V.**, Pluchinotta I., Tsoukiàs A. *Supporting decisions in public policy making processes: generation of alternatives and innovation*. European Journal of Operational Research (ABS level 4, **I.F. 3.297**, under review – revise and resubmit).

### 5.2 Refereed journal papers

**2017 Ferretti V.**, Montibeller G. An integrated framework for environmental multi-impact spatial risk analysis. Risk Analysis, ABS level 4, **I.F. 2.518**, DOI:10.1111/risa.12942.

**Ferretti V.** 2017. *What to do with disused railways?* IMPACT. The Operational Research Society. Palgrave Macmillan.

Ciomek K., **Ferretti V.**, Kadzinski M. Predictive analytics and disused railways requalification: insights from a Post Factum Analysis perspective. Decision Support Systems, ABS level 3, **I.F. 3.222**, <https://doi.org/10.1016/j.dss.2017.10.010> [authors listed in alphabetical order].

**Ferretti V.**, Gandino E. *Co-designing the solution space for rural regeneration in a new World Heritage site: a Choice Experiments approach*. European Journal of Operation Research, ABS level 4, **I.F. 3.297**, <https://doi.org/10.1016/j.ejor.2017.10.003>. *This study has been selected as a finalist for the INFORMS 2016 Decision Analysis Practice Award and has been awarded runner up. It has also been selected as a semi-finalist for the INFORMS 2018 Innovative Applications of Analytics Award.*

<sup>8</sup> This section presents only international scientific publications. Dr. Ferretti is also author of many Italian publications that can be retrieved at the following website: <http://porto.polito.it/view/creators/Ferretti=3AValentina=3A021114=3A.html>

<sup>9</sup> Association of the Business Schools – ABS- Journal Guide. The Guide classifies journals into four categories (1 to 4, where category 4 is the best one) plus a Journal of Distinction category (4\*), which recognises the quality of those journals ranked as a ‘top’ class journal in at least three out of five international listings consulted.

**Ferretti V.**, Liu J., Mousseau V., Ouerdane W. *Reference-based ranking procedure for environmental decision making: Insights from an ex-post analysis*. Environmental Modelling and Software, 99: 11-24, **I.F. 4.404**, <https://doi.org/10.1016/j.envsoft.2017.09.009>.

**Ferretti V.**, Degioanni A., *How to support the design and evaluation of redevelopment projects for disused railways? A methodological proposal and key lessons learned*. Transportation Research Part D: Transport and Environment, ABS level 3, **I.F. 2.341**, 52: 29-48, 10.1016/j.trd.2017.02.008. *This study has been selected as a finalist in the INFORMS 2017 Innovative Applications of Analytics Award and has been awarded the second position<sup>10</sup>.*

Oppio A., Bottero M., **Ferretti V.** *Designing adaptive reuse strategies for cultural heritage with choice experiments*. Green Energy and Technology, pp. 303-315.

**2016** **Ferretti V.** *From stakeholders' analysis to cognitive mapping and Multi Attribute Value Theory: an integrated approach for policy support*. European Journal of Operation Research, ABS level 4, **I.F. 3.297**, 253(2), pp. 524-541, 10.1016/j.ejor.2016.02.054.

Berta M., Bottero M., **Ferretti V.** *A Mixed Methods Approach for the Integration of Urban Design and Economic Evaluation: Industrial Heritage and Urban Regeneration in China*. Environment and Planning B, DOI: 10.1177/0265813516669139 [authors listed in alphabetical order].

**Ferretti V.**, Montibeller G. *Key challenges and meta-choices in designing and applying multi-criteria spatial decision support systems*. Decision Support Systems, ABS level 3, **I.F. 3.222**, Vol. 84, pp.41-52, 10.1016/j.dss.2016.01.005

Comino E., **Ferretti V.** *Indicators-based spatial SWOT analysis: Supporting the strategic planning and management of complex territorial systems*. Ecological Indicators, **I.F. 3.898**, Vol. 60, pp. 1104-1117 [authors listed in alphabetical order].

Angilella S., Bottero M., Corrente S., **Ferretti V.**, Greco S., Lami I. *Non Additive Robust Ordinal Regression for urban and territorial planning: an application for siting an urban waste landfill*. Annals of Operational Research, **I.F. 1.709**, 245(1-2), pp. 427-456, DOI: 10.1007/s10479-015-1787-7 [authors listed in alphabetical order].

**2015** Bottero M., **Ferretti V.**, Figueira J., Greco S., Roy B. *Dealing with a multiple criteria environmental problem with interaction effects between criteria through an extension of the Electre III method*. European Journal of Operational Research, ABS level 4, **I.F. 3.297**, Vol. 245, issue 3, pp. 837-950 [authors listed in alphabetical order].

Lombardi P., **Ferretti V.** *New Spatial Urban Decision Support Systems for Sustainable Urban and Regional development*. Smart and Sustainable Built Environment, Vol. 4 Issue 1 pp. 45 – 66, <http://dx.doi.org/10.1108/SASBE-07-2014-0039>

Bottero M., **Ferretti V.**, Mondini G. *How to support strategic decisions in territorial transformation processes*. International Journal of Agricultural and Environmental Information Systems, Vol 6, Issue 4, pp. 40-55

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<sup>10</sup><https://www.informs.org/Recognizing-Excellence/Community-Prizes/Analytics-Society/Innovative-Applications-in-Analytics-Award>

**Ferretti V.**, Bottero M., Mondini G. *A spatial decision support tool to study risks and opportunities of complex environmental systems*. Journal of Environmental Accounting and Management, 3(2), 197-213.

**Ferretti V.**, Comino E. *An integrated framework to assess complex cultural and natural heritage systems with Multi-Attribute Value Theory*. Journal of Cultural Heritage, **I.F. 1.838**, 16(5): 688-697, <http://dx.doi.org/10.1016/j.culher.2015.01.007>.

Oppio A., Bottero M., **Ferretti V.**, Fratesi U., Ponzini D., Pracchi V. *Giving space to Multicriteria Analysis for complex cultural heritage systems: the case of the castles in Valle D'Aosta Region, Italy*. Journal of Cultural Heritage, **I.F. 1.838**, doi:10.1016/j.culher.2015.03.003.

**2014** Boerboom L., **Ferretti V.** *Actor Network Theory Perspective on a Forestry Decision Support System Design*. Scandinavian Journal of Forest Research, Vol. 29, pp. 84-95, **I.F. 1.688**, DOI: 10.1080/02827581.2014.946960 [authors listed in alphabetical order].

Bottero M., **Ferretti V.**, Mondini G., Pomarico S. *Enabling public participation in Strategic Environmental Assessment: an application of Multicriteria Analysis*, Strategic Behavior and the Environment, Vol. 4, pp. 99-130 [authors listed in alphabetical order].

Bottero M., **Ferretti V.**, Mondini G. *Towards smart and sustainable communities*. Advanced Engineering Forum, Vol. 11, pp. 131-135, doi:10.4028/www.scientific.net/AEF.11.131 [authors listed in alphabetical order].

**Ferretti V.**, Bottero M., Mondini G. *From indicators to composite indexes: an application of the Multi-Attribute Value Theory for assessing sustainability*. Advanced Engineering Forum, Vol. 11, pp. 536-541, doi:10.4028/www.scientific.net/AEF.11.536

Oppio A., Bottero M., **Ferretti V.** *Multicriteria spatial analysis for competitive cultural heritage in fringe areas: the case of Valle d'Aosta castles*. Advanced Engineering Forum, Vol. 11, pp.579-584, doi:10.4028/www.scientific.net/AEF.11.579.

**Ferretti V.**, Bottero M., Mondini G. *Decision making and cultural heritage: an application of the Multi Attribute Value Theory for the reuse of historical buildings*, Journal of Cultural Heritage, Vol. 15, n. 6, pp. 644-655, **I.F. 1.838**, <http://dx.doi.org/10.1016/j.culher.2013.12.007>.

Bottero M., **Ferretti V.**, Pomarico S. *Assessing different possibilities for the reuse of an open-pit quarry using the Choquet integral*, Journal of Multi-Criteria Decision Analysis, ISSN: 1099-1360, Vol. 21, n.1-2, pp. 25-41, DOI: 10.1002/mcda.1509 [authors listed in alphabetical order].

**2013** Bottero M., **Ferretti V.**, Mondini G. *From the environmental debt to the environmental loan: trends and future challenges for intergenerational discounting*. Environment, Development and Sustainability, Vol. 15, n. 6, pp. 1623–1644. DOI 10.1007/s10668-013-9453-1 [authors listed in alphabetical order].

**Ferretti V.**, Pomarico S. *Ecological land suitability analysis through spatial indicators: an application of the Analytic Network Process technique and Ordered Weighted Average approach*, *Ecological Indicators*, **I.F. 3.898**, Vol. 34, pp. 507-519, ISSN: 1470-160X.

Bottero M., Comino E., Duriavig M., **Ferretti V.**, Pomarico S. *The application of a Multicriteria Spatial Decision Support System (MCSDSS) for the assessment of biodiversity conservation in the Province of Varese (Italy)*, *Land Use Policy*, **I.F. 3.089**, Vol. 30, pp. 730-738, ISSN: 0264-8377 [authors listed in alphabetical order].

Bottero M., **Ferretti V.**, Mondini G. *A Choquet integral - based approach for assessing the sustainability of a new waste incinerator*, *International Journal of Multicriteria Decision Making*, Vol.3, n. 2/3, pp. 157-177, ISSN: 2040-1078 [authors listed in alphabetical order].

**2012** **Ferretti V.**, Pomarico S. *An integrated approach for studying the land suitability for ecological corridors through spatial multicriteria evaluations*, *Environment, Development and Sustainability*, Vol. 15, n. 3, pp. 859-885, ISSN: 1387-585X, DOI 10.1007/s10668-012-9400-6.

Bottero M., **Ferretti V.**, Pomarico S. *Assessing the sustainability of alternative transport infrastructures*, *International Journal of the Analytic Hierarchy Process*, Vol. 4, Issue 1, pp. 61-77, ISSN: 1936-6744 [authors listed in alphabetical order].

**Ferretti V.**, Pomarico S. *Integrated sustainability assessments: a spatial multicriteria evaluation for siting a waste incinerator plant in the Province of Torino (Italy)*, *Environment, Development and Sustainability*, Vol. 14, Issue 5, pp. 843-867, ISSN: 1387-585X, DOI: 10.1007/s10668-012-9354-8.

**2011** **Ferretti V.** *A Multicriteria- Spatial Decision Support System development for siting a landfill in the Province of Torino (Italy)*, *Journal of Multi-Criteria Decision Analysis*, Vol. 18, pp. 231-252, ISSN: 1099-1360, (**prize-winning paper for the Wiley Practice prize at the International Conference on Multiple Criteria Decision Making, June 2011, Jyväskylä, Finland**).

Bottero M., **Ferretti V.** *Assessing urban requalification scenarios by combining environmental indicators with the Analytic Network Process*, *Journal of Applied Operational Research*, Vol. 3, No. 2, pp. 75-90, ISSN: 1735-8523 [authors listed in alphabetical order].

Bottero M., **Ferretti V.** *An Analytic Network Process (ANP) based approach for location problems: the case of a new waste incinerator plant in the Province of Torino (Italy)*, *Journal of Multi-Criteria Decision Analysis*, Vol. 17, No. 3-4, pp. 63-84, DOI: 10.1002/mcda.456, ISSN: 1057-9214 [authors listed in alphabetical order].

**2010** Bottero M., **Ferretti V.** *Integrating the Analytic Network Process (ANP) and the Driving-forces, Pressures, State, Impacts, Responses (DPSIR) Model for the Sustainability Assessment of Territorial Transformations*, *Management of Environmental Quality: An International Journal*, Vol. 21, Issue 5, pp. 618-644, DOI 10.1108/14777831011067926, ISSN:1477-7835 [authors listed in alphabetical order].

5.3 Book chapters

**2015** Geneletti D., **Ferretti V.** *Multicriteria analysis for sustainability assessment: concepts and case studies*. In: Morrison-Saunders A., Pope J. and Bond A. (eds) *Handbook of Sustainability Assessment*, Cheltenham: Edward Elgar Publishing Ltd, pp. 235-264.

Bottero M., **Ferretti V.**, Mondini G., *Towards an integrated economic assessment of landscape*, in: Gambino R., Peano A. (eds.), *Nature Policies and Landscape Policies. Towards an alliance*, Springer, Vol. 18, pp. 371-380, ISBN: 978-3-319-05409-4 (Print) 978-3-319-05410-0 (Online) [authors listed in alphabetical order].

**2014** Lami I., **Ferretti V.**, *Spatial decisional processes: evaluation tools and new challenges*, in: Melis G., Masala E. (eds.), *InViTo - A European experience for brownfield redevelopment*, Celid, Turin, pp. 57-71.

5.4 Conference proceedings

**2017** Colorni A., **Ferretti V.**, Luè A., Oppio A., Paruscio V., Tomasini L. *Rethinking Feasibility Analysis for Urban Development: a Multidimensional Decision Support Tool*. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics) 10406 LNCS, pp. 624-638.

**2016** **Ferretti V.** *Exploring multi-methodology approaches for policy support: case studies and lessons learned*. OR58 Annual Conference - Keynote Papers, University of Portsmouth, Portsmouth, 6 – 8 September 2016.

**Ferretti V.**, Guney S., Montibeller G., Von Winterfeldt D., *Testing Best Practices to Reduce the Overconfidence Bias in Multi- Criteria Decision Analysis*. Proceedings of the Annual Hawaii International Conference on System Sciences. January 2016.

**2015** Bottero M., **Ferretti V.**, Mondini G. *Calculating Composite Indicators for Sustainability*. In: O. Gervasi et al. (Eds.): *ICCSA 2015, Part III*, LNCS 9157, pp. 20–35. Springer International Publishing Switzerland (2015) DOI: 10.1007/978-3-319-21470-2\_2

**2014** **Ferretti V.**, Bottero M., Mondini G. *An Integrated Approach for Exploring Opportunities and Vulnerabilities of Complex Territorial Systems*. In: B. Murgante et al. (Eds.): *ICCSA 2014, Part III*, LNCS 8581, pp. 667-681. Springer International Publishing Switzerland (2014) doi:10.1007/978-3-319-09150-1\_49 (**Best paper at the ICCSA 2014 Conference**).

Bottero M., **Ferretti V.**, Mondini G. *Constructing multi-attribute value functions for sustainability assessment of urban projects*. In: B. Murgante et al. (Eds.): *ICCSA 2014, Part III*, LNCS 8581, pp. 51-64. Springer International Publishing Switzerland (2014) doi:10.1007/978-3-319-09150-1\_5 [authors listed in alphabetical order].

**2011** **Ferretti V.**, *Integrating Multicriteria Analysis and Geographic Information Systems: a survey and classification of the literature*, Proceedings of the 74th meeting of the European working group on “Multiple Criteria Decision Aiding” (6-8 October 2011 Yverdon Les Bains, Switzerland).

Bottero M., **Ferretti V.**, Mondini G., *Towards an integration in sustainability assessment: the application of the Choquet integral for siting a waste incinerator*, Proceedings of the 74th meeting of the European working group on “Multiple Criteria Decision Aiding” (6-8 October 2011 Yverdon Les Bains, Switzerland) [authors listed in alphabetical order].

**Ferretti V.**, Pomarico S., *Integrating Multicriteria Analysis and Geographic Information Systems for studying ecological corridors in the Piedmont Region*, Proceedings of the 74th meeting of the European working group on “Multiple Criteria Decision Aiding” (6-8 October 2011 Yverdon Les Bains, Switzerland).

Bottero M., **Ferretti V.**, Pomarico S., *An application of the Analytic Network Process for assessing the sustainability of different transport infrastructures*, Proceedings of the 11th International Symposium on the Analytic Hierarchy Process (15-18 June 2011, Sorrento, Italy) [authors listed in alphabetical order].

**Ferretti V.**, Pomarico S., *The development of a Multicriteria- Spatial Decision Support System for siting a waste incinerator plant in the Province of Torino (Italy)*, Proceedings of the 73rd meeting of the European working group on “Multiple Criteria Decision Aiding” (14-16 April 2011, Corte, France).

**2010** Bottero M., **Ferretti V.**, Pomarico S., *Using the Analytic Network Process (ANP) for enhancing public participation in urban planning processes: the case of the Municipal Plan of Volta Mantovana (Italy)*, Proceedings of the 72nd meeting of the European working group on “Multiple Criteria Decision Aiding” (7 – 9 October 2010, Paris, France) [authors listed in alphabetical order].

Bottero M., **Ferretti V.**, *Exploring Benefits, Opportunities, Costs and Risks of territorial transformations: a combined Analytic Network Process (ANP) model and Driving forces-Pressures - State - Impacts - Responses (DPSIR) framework for Environmental Assessment*, Proceedings of the 2nd International Conference on Applied Operational Research (ICAOR) (25 – 27 August 2010, Turku, Finland), pp. 336- 347, ISSN: 2008-0050, ISBN: 978-952-12-2414-0 [authors listed in alphabetical order].

### 5.5 Others

**2017** **Ferretti V.** Spatial MCDA: trends and challenges. Opinion Makers Section. European Working Group “Multiple Criteria Decision Aiding” Newsletter, Series 3, n° 36 Fall 2017, pp. 2-4.

## 6 Research funding bids applied and received

- 2017** Scientific Exchange Proposal titled *Extending Bayesian inference models with structured expert judgment to the spatial dimension: a framework for spatial risk assessment*; 6140 Euro; host institution: Paul Scherrer Institut - ETH, Zurich (Switzerland); submitted to Swiss National Science Foundation (November and December 2017).
- 2017** Short Term Scientific Mission proposal for COST Action IS1304 (Expert Judgment Network: Bridging the Gap Between Scientific Uncertainty and Evidence-Based Decision Making) on *Spatial environmental decision making with portfolio decision analysis: design and development of a behavioural experiment*; 2480 Euro; host institution: Systems Analysis Laboratory, Aalto University, Helsinki (Finland); submitted to COST (European Cooperation in Science and Technology).
- 2017** London School of Economics and Political Science, Department of Management: additional research funding won for the presentation and publication of a study about decision analytics deployed to support disused railways requalification in Italy (1700€).
- 2017** London School of Economics and Political Science, Department of Management: grant awarded to a master student for the development of a thesis dissertation under the supervision of Dr Valentina Ferretti (the grant has been used to design and run a behavioural experiment on maps and risk perception); 500€.
- 2016** Visiting Scholar Scholarship. University of Agder, Kristiansand, Norway (2600 Euro).
- 2016** Short Term Scientific Mission proposal for COST Action IS1304 (Expert Judgment Network: Bridging the Gap Between Scientific Uncertainty and Evidence-Based Decision Making) on *Behavioural biases in expert judgment for uncertainty modelling in the spatial domain*; 1080 Euro; host institution: Institute of Mathematical Sciences, Madrid (Spain); submitted to COST (European Cooperation in Science and Technology).
- 2016** London School of Economics and Political Science, Department of Management: additional research funding won for the development and publication of an innovative study about behavioural issues in environmental decision making (4500€).
- 2011-2015** Politecnico of Torino: Post Doc Fellowship (4 years, awarded in 2011).
- 2013-2014** London School of Economics and Political Science, Department of Management: visiting research funds.
- 2013** Short Term Scientific Mission proposal for COST Action FP1207 (ORCHESTRA) on *Forest policy and policy science: mapping policy concepts*



*and theoretical perspectives* (Co- applicant together with Dr. Luc Boerboom); 1900 Euro; host institution: Faculty of Geo-Information Science and Earth Observation - ITC, University of Twente, Enschede (The Netherlands); submitted to COST (European Cooperation in Science and Technology).

- 2013** Short Term Scientific Mission proposal for COST Action FP0804 (FORSYS) on *Actor Network Theory to understand collaborative Decision Support Systems in forest management practice* (Principal applicant); 1400 Euro; host institution: Faculty of Geo-Information Science and Earth Observation - ITC, University of Twente, Enschede (The Netherlands); submitted to COST (European Cooperation in Science and Technology).
- 2011- 2013** “High level training program” for promising young PhDs of the Technical University of Turin (Italy) (8.000 Euro of travel funds for 2 years).
- 2012** Short Term Scientific Mission proposal for COST Action FP0804 (FORSYS) on *Overcoming challenges of integrating DSS in strategic collaborative forestry scenario development* (Principal applicant); 2500 Euro; host institution: Faculty of Geo-Information Science and Earth Observation - ITC, University of Twente, Enschede (The Netherlands); submitted to COST (European Cooperation in Science and Technology).
- 2008-2011** Politecnico of Torino: Doctoral Scholarship (3 years) (awarded in 2011).

## 7 Current research projects

### International collaborations

**Paul Scherrer Institut, Laboratory for Energy Systems Analysis (Villigen, Switzerland).** Project: expert judgment elicitation protocols and Bayesian inference in the context of spatial decision process (with Dr Matteo Spada) (since 2017).

**University of Adger (Kristiansand, Norway).** Project: Cognitive and motivational biases in crisis and emergency management (with Prof. Tina Comes) (since 2016).

**Instituto de Ciencias Matematicas (ICMAT) (Madrid, Spain).** Project: Behavioural biases in expert judgment for uncertainty modelling in the spatial domain (with Professor David Rios) (since 2016).

**System Analysis Laboratory in Aalto University (Helsinki, Finland).** Project: Spatial environmental decision making with portfolio decision analysis: design and development of a behavioural experiment (with Professor Raimo P. Hämäläinen) (since 2016).

**Southern University of California (Los Angeles, USA) and Loughborough University (UK).** Project: Debiasing overconfidence (with Professor Detlof von Winterfeldt and Professor Gilberto Montibeller) (since 2015).

**Technical University of Lisbon (Portugal) and University of Catania (Italy).** Project: Interactions within Multicriteria decision-making problems (with Professor José Figueira and Professor Salvatore Greco) (since 2013).

**CNRS LAMSADE (Laboratoire d'Analyse et Modélisation de Systèmes pour l'Aide à la Decision), Université Paris Dauphine (France).** Project: Analytics for innovative policy design (with Professor Alexis Tsoukiàs) (since 2013).

**University of Twente, Faculty of Geo-Information Science and Earth Observation (The Netherlands).** Project: Spatial Multicriteria Evaluation and ontology development (with Dr. Luc Boeboom) (since 2014).

**Technical University of Milan (Italy).** Project: Designing coalitions of elementary actions for urban ago-puncture (with Prof Alessandra Oppio and Professor Alberto Colorni) (since 2016).

**University of Trento (Italy).** Project: sustainability assessments and Multicriteria Analysis (with Professor Davide Geneletti) (since 2014).

## 8 Completed research projects

- 2016 FARB: feasibility analysis of urban projects in the contemporary city: the evaluation as a support tool for the construction of coalitions of actions (scientific coordinator: Professor Alessandra Oppio, Politecnico of Milan, Italy).
- 2013-2015 COST Action FP1207, ORCHESTRating forest-related policy analysis in Europe (ORCHESTRA) (scientific coordination: Dr. Luc Boerboom, University of Twente, The Netherlands).
- 2012-2013 COST Action FP0804, Forest Management Decision Support Systems (FORSYS) (scientific coordination: Dr. Luc Boerboom, University of Twente, The Netherlands).
- 2011-2012 ForeStClim, Transnational Forestry Management Strategies in Response to Regional Climate Change Impacts, INTERREG IVB North West Europe (NWE) Programme (<http://www.forestclim.eu/>) (scientific coordination: Dr. Luc Boerboom, University of Twente, The Netherlands).
- 2008- 2015 Assistance in consultancy work and participation in research projects for the Higher Institute on Territorial Systems for Innovation in Turin (Italy) (SiTI; <http://www.siti.polito.it/index.php?l=ENG>).  
Experimental applications and research concerning environmental assessment procedures and decision support tools in the field of sustainability assessment of urban and territorial transformation at different scales.  
The main research projects developed with real clients concerned: (i) the development of a risk map of the cultural heritage for Italy, (ii) the prioritization of different road projects in the Province of Turin through Multicriteria Analysis, (iii) the study of the carrying capacity of the Vesuvio Park in Italy, (iv) the development of the territorial management plan for the city of Volta Mantovana in Italy with participatory Decision Support Systems; (v) the development of the sustainability plan of the Technical University Campus in Turin, (vi) the structuring of the new Regional Transportation Plan for the Piedmont Region with value focused thinking and multicriteria decision analysis, (vii) the deployment of a multi-methodology intervention to support planning and management in the recently nominated World Heritage Site “the vineyard landscape of Langhe, Roero and Monferrato”<sup>11</sup>.

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<sup>11</sup> This project has been recently awarded the **runner up** position for the **INFORMS 2016 Decision Analysis Practice Award** and is currently selected among the **semi-finalists for the INFORMS 2018 Innovative Applications of Analytics Award**.

## 9 Professional activities

Secretary/Treasurer for the INFORMS section on Multiple Criteria Decision Making (2015- 2019)

### Journals – appointments

- **Editor of the Special Issue** on “Spatial Risk Analysis” for the Journal **Risk Analysis**<sup>12</sup> (together with Dr. Nikolaos Argyris, Prof. Simon French, Prof. Gilberto Montibeller) (2016-2018)
- **Section Editor** for News and Events for the International Journal of the Analytic Hierarchy Process (since November 2013).
- **Member of the Editorial board** of the following Journals:
  - Ecological Indicators (I.F. 3.898) (since 2015)

### Refereeing for scientific journals

Dr Valentina Ferretti has completed over 30 reviews of scientific papers in top international journals in the last two years, thus reaching the **94<sup>th</sup> percentile** for the total number of reviews (please, visit <https://publons.com/author/1328791/valentina-ferretti#profile> for detailed statistics about Dr Ferretti’s peer review and Editorial track record).

The following are the scientific journals for which Dr Valentina Ferretti has been and is a reviewer:

- Environmental Modelling and Software (since 2017)
- Group Decision and Negotiation (since 2017)
- Risk Analysis (since 2016)
- Forests (since 2015)
- Environmental Science and Technology (since 2015)
- European Journal of Operational Research (since 2014)
- Journal of Environmental Management (since 2014)
- OMEGA (since 2014)
- The International Journal of Management Science (since 2014)
- Operational Research: An International Journal (since 2014)
- Environment and Natural Resources Research (since 2013)
- Journal of Sustainable Development (since 2013)
- Modern Applied Science (since 2013)
- International Transactions in Operational Research (since 2012)
- Ecological Indicators (since 2012)
- Journal of Multi-Criteria Decision Analysis (since 2012)
- Biomass and bioenergy (since 2012)
- Waste Management (since 2012)
- International Journal of the Analytic Hierarchy Process (since 2012)
- International Journal of Information Technology & Decision Making (since 2012)
- Journal of Applied Operational Research (since 2012)
- Geoinformatics & Geostatistics: An Overview (since 2012)
- Environment and Natural Resources Research (since 2012)

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<sup>12</sup> ABS level 4, [http://www.sra.org/sites/default/files/pdf/SpecialissueproposalforRiskAnalysis\\_Jun20.pdf](http://www.sra.org/sites/default/files/pdf/SpecialissueproposalforRiskAnalysis_Jun20.pdf), <http://www.sra.org/sra-journal>

- Journal of Sustainable Development (since 2012)
- Modern Applied Science (since 2012)
- The Egyptian Journal of Remote Sensing and Space Sciences (since 2012)
- The Journal of Earth Science Informatics (since 2012)
- The Journal of Tropical Forest Science (since 2012)

### Conferences – stream organizer

- **OR59 Annual Conference.** The Operational Research Society (UK). Organizer of the stream “Multiple Criteria Decision Analysis (MCDA)”<sup>13</sup>. 12-14 September 2017, Loughborough (UK)

### Conferences – chairing sessions

Invited to organize sessions in the main Decision Analysis and Operational Research conferences:

- **Building Expertise for Innovation.** Conference on Innovation Decision Support Using Structured Expert Judgment. April 25-27, 2017, Aalto University, Espoo, Finland. Chair of the session “Techniques of Expert Judgment Elicitation”.
- **INFORMS Conference – USA. The Institute for Operations Research and the Management Sciences.** Organizer of one session in November 2015 and of one session in November 2016 in the Multiple Criteria Decision Making cluster (title of the sessions: Spatial Multi-Criteria Decision Analysis: insights and future developments). Organizer of one session in October 2017 in the Decision Analysis stream (title of the session: Spatial Decision Analysis).
- **EURO Conference** – European Conference on Operation Research: organizer of three sessions in July 2015 in the Multiple Criteria Decision Aiding stream. Title of the sessions: Spatial Multicriteria Evaluation: insights and applications (i), Spatial Multicriteria Evaluation: insights and applications (ii) and MCDM Applications I. Organizer of four sessions in July 2016. Title of the sessions: (i) Spatial Multicriteria Evaluation: insights and future directions, (ii) Spatial Risk Analysis, (iii) Workshop on Spatial Multicriteria Analysis, (iv) AHP/ANP in urban planning and management of energy transition.
- **IFORS Conference** – International Federation of Operational Research Societies: organizer of two sessions in July 2017 in the Multicriteria Decision Analysis stream. Title of the sessions: MCDA applications and new research directions.
- **MCDM Conference** – International Conference on Multiple Criteria Decision Making. Organizer of one session in August 2015 (title of the session: MCDM for smart and sustainable communities) and one session in July 2017 (title of the session: Spatial Multiple Criteria Decision Making: insights and new directions of research). Chairman of the session titled “Environmental Decision Making” in 2013.
- **ISAHP 2016** – International Symposium on the AHP/ANP. Organizer of one session in August 2016. Title of the session: Integrated approaches using the ANP: insights and future directions of research.
- **DIMACS/CCICADA Workshop on Urban Planning for Climate Events** September 2013: *chairman* in the morning session, Rutgers, The State University of New Jersey, Piscataway, USA.

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<sup>13</sup> <http://www.theorsociety.com/Pages/Conferences/OR59/streams/MCDA.aspx>

## 10 Principal investigator in behavioural experiments

Principal investigator in 7 behavioural lab experiments:

- Three experiments about **debiasing overconfidence** (the first one was developed at the Politecnico of Torino (2015, Italy), the second and the third experiments have been developed at the London School of Economics and Political Science (2016 and 2017, United Kingdom), in collaboration with the Southern University of California and the University of Loughborough (UK). The development of these three experiments was supported by research funding provided by the University of Southern California.
- One experiment about **biases in spatial decision-making processes** (London School of Economics and Political Science, London, UK, November 2016). The development of this experiment was supported by a grant awarded to Dr Valentina Ferretti from the Department of Management of the London School of Economics and Political Science (please, see section 6 of this CV).
- One experiment about **prospect theory and spatial decision support systems** (London School of Economics and Political Science, London, UK, June 2017). The design of this experiment was supported by a grant awarded to a master student for the development of his thesis dissertation under the supervision of Dr Valentina Ferretti (please, see section 6 of this CV).
- One experiment is currently in progress and deals with the use of **spatial information and the perception of risk** (in collaboration with the Institute of Mathematical Sciences in Madrid, Spain).
- Another experiment is currently in progress and deals with the **range insensitivity bias in the spatial context** (in collaboration with Aalto University in Helsinki, Finland).

## 11 Principal facilitator in Decision Analysis interventions

- Facilitator in a project developed for the Piedmont Region Authority in Italy (2011). The objective of the intervention was to structure a decision model using Multi Criteria Analysis to identify the best layout for the extension of the Turin ring road. Number of participants: 15. Type of participants: stakeholders + client. Steps of the process in which we organized and facilitated a focus group: definition and sharing of the evaluation model + weighing of the decision elements.

- Facilitator in a project developed for the Volta Mantovana Municipality in the Lombardy Region (Italy) (2012). The objective of the project was to develop a decision model using Multicriteria Analysis to support the definition of objectives and alternatives to be included in the new Territorial Management Plan of the Municipality. Number of participants: 16. Type of participants: representative of the stakeholders + technical experts + client. Steps of the process in which we organized and facilitated focus groups: definition and sharing of the evaluation model + weighing of the decision elements.

- Facilitator in a project for the Piedmont Region Authority in which we used Multi Attribute Value Theory to define and prioritize territorial strategies for the regeneration of an abandoned railway line in Piedmont (2015). Number of participants: 7. Type of participants: technical experts. Steps of the process in which we organized and facilitated focus groups: definition and sharing of the evaluation model + preference elicitation + development of real-time sensitivity analysis and discussion of the final results.

- Facilitator in a project for the Transportation Sector of the Piedmont Region authority in Italy (2015). The aims of the project were twofold: (i) identifying a comprehensive list of objectives to be included in the new Strategic Transportation Plan for 2050 and (ii) prioritizing the objectives of the plan in order to identify a set of actions to be developed in the Region. In the first phase of the project we used the devices proposed by Keeney for objectives' identification while in the second phase I used Multi Criteria Decision Analysis. Number of participants: 15. Type of participants: technical experts + client. Steps of the process in which we organized and facilitated focus groups: generation of objectives + definition and sharing of the evaluation model + preference elicitation + analysis and discussion of the final results.

## 12 Invited research talks

- 2017**
- **Paul Scherrer Institut (PSI), ETH, Zurich (Switzerland)**, invited research seminar in December 2017 titled “On the effectiveness of debiasing overprecision in probabilistic estimates”.
  - **Aalto University, Systems Analysis Laboratory, Helsinki (Finland)**, invited research seminar in April 2017 titled “Can maps bias weights elicitation in spatial environmental decision making? Insights from a behavioral experiment”.
  - **Finnish Environmental Institute, Helsinki (Finland)**, invited research seminar in April 2017 titled “Can maps bias spatial environmental decision making? Highlights from a recent literature review”.
  - **Loughborough University (UK)**, invited research talk in February 2017 on behavioural biases in spatial decision making.
- 2016**
- **London School of Economics and Political Science (London, UK)**, invited research talk in November 2016 at the LSE Management Science Showcase: Recent Operational Research and Decision Sciences activity at LSE and nearby on “Combining Multi Criteria Analysis with interactive visualization and real-time sensitivity simulations to support the regeneration process of disused railways”<sup>14</sup>.
  - **Instituto de Ciencias Matematicas (ICMAT, Madrid, Spain)**, invited research talk in November 2016 on “Combining Analytics to support the regeneration process of disused railways”.
  - **University of Portsmouth (UK)**, invited research talk in April 2016 on the role of mixing methods in environmental decision making and policy making.

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<sup>14</sup> This project has been selected among the finalists for the 2017 INFORMS Innovative Applications of Analytics Award and was awarded the second position.



### 13 Presentations in conferences

#### Invited keynotes

- 2016** - **OR58 Annual Conference**, Multi-methodology approach for policy support, **invited keynote** under the Multiple Criteria Decision Analysis stream, 6-8 September 2016, Portsmouth (**UK**).

#### Member of panels

- 2017** - **OR59 Annual Conference**, invited member in the panel about OR teaching, 12-14 September 2017, Loughborough (**UK**).

#### Invited paper presentations – USA & CANADA

- 2017**
- **INFORMS Annual Conference**, *A multi-methodology approach for Community-based Operations Research in a new World Heritage site*, **invited talk** under a session on Community Based Operations Research, 22-25 October 2017, Houston (Texas, **USA**).
  - **INFORMS Annual Conference**, *How to improve educational programs for underprivileged children? The impacts of value-focused Decision Analysis*, **finalist talk for the Decision Analysis Practice Award and winner of the Award**, 22-25 October 2017, Houston (Texas, **USA**).
  - **IFORS Conference**, *Any bias in spatial decision making processes?* **Invited talk** in the Behavioural OR stream, 17-21 July 2017, Quebec City (Canada).
  - **IFORS Conference**, *On the effectiveness of debiasing overprecision in probabilistic estimates*, **invited talk** given together with Professor Gilberto Montibeller in the Behavioural OR stream, 17-21 July 2017, Quebec City (Canada).
  - **INFORMS Analytics Conference**, *How to Regenerate Disused Railways? An Integrated Analytics Approach*, **finalist talk for the INFORMS Innovative Applications of Analytics Award 2017**, 2-4 April 2017, Las Vegas (**USA**).
- 2016**
- **INFORMS Annual Conference**, *From Spatial Swot Analysis to MCDA And Choice Experiments: An Integrated Approach For Historical Heritage Management In A New World Heritage Site*, **invited talk** under a session on Community Based Operations Research and **finalist talk for the Decision Analysis Practice Award 2016**, 13-16 November 2016, Nashville (**USA**).
- 2016**
- **INFORMS Annual Conference**, *Multi-criteria Spatial Risk Analysis for Resource Allocation Decisions*, **invited talk** under a session in the Decision Analysis stream, 13-16 November 2016, Nashville (**USA**).

- 2015** - **INFORMS Annual Conference**, *Debiasing Overconfidence*, **invited talk** under a session in the Decision Analysis stream, 1-4 November 2015, Philadelphia (USA).
- 2014** - **INFORMS Annual Conference**, *Multi-Criteria Spatial Risk Analysis*, **invited talk** under a session in the Decision Analysis stream, 9-12 November 2014, San Francisco (USA).
- 2012** - **INFORMS Annual Conference** *Integrating Multicriteria Analysis and Geographic Information Systems: an application of Spatial ANP*, **invited talk**, 14-17 October 2012, Phoenix (Arizona, USA).

### Invited paper presentations - EUROPE

- 2016** - 28<sup>th</sup> European Conference on Operational Research (**EURO**), *Debiasing Overconfidence*, **invited talk** given together with Prof Gilberto Montibeller, 4-6 July 2016, Poznan (Poland).
- 28<sup>th</sup> European Conference on Operational Research (**EURO**), *Multi-Criteria Spatial Risk Analysis*, **invited talk** given together with Prof Gilberto Montibeller, 4-6 July 2016, Poznan (Poland).
- 2015** - 27<sup>th</sup> European Conference on Operational Research (**EURO**), *An extension of Electre III for dealing with a multiple criteria environmental problem with interaction effects between criteria*, **invited talk** given together with Dr Marta Bottero, 12-15 July 2015, Glasgow (UK).
- 27<sup>th</sup> European Conference on Operational Research (EURO), *Multi-Criteria Spatial Risk Analysis*, **invited talk** given together with Professor Gilberto Montibeller, 12-15 July 2015, Glasgow (UK).
- 23<sup>rd</sup> International Conference on Multiple Criteria Decision Making **MCDM**, *debiasing Overconfidence in Multi-Criteria Decision Analysis*, **invited talk** given together with Professor Gilberto Montibeller, 2-7 August 2015, Hamburg (Germany).
- 23<sup>rd</sup> International Conference on Multiple Criteria Decision Making **MCDM**, *Multicriteria Decision Aiding for strategic assessment in urban processes*, **invited talk** given together with Dr. Marta Bottero, 2-7 August 2015, Hamburg (Germany).
- 2014** - *Interview to Thomas Saaty*, **invited talk** given at the seminar “Multicriteria Analysis, Evaluation, Decision Processes”, 29-30 May 2014, Turin (**Italy**).
- 12<sup>th</sup> Decision Deck Workshop, *MCDA real world case studies: abandoned railway lines and disused farms to be recovered for touristic purposes*, **invited talk**, 30-31 October 2014, Brest (**France**).

- 2013**
- Dealing with Disasters International Conference (**DwD 2013**) and 4<sup>th</sup> Conference of the International Society for Integrated Disaster Risk Management (**IDRiM 2013**), *Multi-impact spatial risk analysis for resource allocation decisions*, **invited talk**, 4-6 September 2013, Newcastle (**UK**).
  - 26th **EURO** Conference on Operational Research, *Facilitated modelling for spatial decision processes*, **invited talk** given together with Professor Gilberto Montibeller, 1-4 July 2013, Rome (**Italy**).
  - 22<sup>nd</sup> International Conference on Multiple Criteria Decision Making, *Non Additive Robust Ordinal Regression for Urban and Territorial Planning: an Application for Siting an Urban Waste Landfill*, **invited talk**, 17-21 June 2013, Málaga (**Spain**).
  - 22<sup>nd</sup> International Conference on Multiple Criteria Decision Making, *Sustainability Assessment and Spatial ANP: a Methodological Proposal for Studying the New Megacity Region Turin-Milan*, **invited talk**, 17-21 June 2013, Málaga (**Spain**).
- 2012**
- 25<sup>th</sup> European Conference on Operational Research (**EURO**), *An ANP- based approach for addressing sustainability in urban transformation projects*, **invited talk**, 8-11 July 2012, Vilnius (**Lithuania**).
  - *La valutazione economica dei beni paesaggistici: una riflessione metodologica*, **invited talk** given at the seminar “Il paesaggio agrario italiano tra sviluppo e conservazione”, progetto “Promozione della Cultura Contadina” REQ, Istituto Nazionale di Economia Agraria –INEA, 11 May 2012, Rome (**Italy**).

### Contributed presentations in workshops and conferences

- 2017**
- **INFORMS Annual Conference**, *Any cognitive bias in spatial decision analysis processes?* Talk presented under a session in the Decision Analysis stream, 22-25 October 2017, Houston (Texas, **USA**).
  - **OR59 Conference**, *An Integrated Framework for Spatial Risk Analysis*, talk given together with Professor Gilberto Montibeller, 12-14 September 2017, Loughborough (UK).
  - **MCDM Conference**, *Unlocking SWOT Analysis: the effect of combining it with spatial analytics and multi-criteria decision aiding*, 10-14 July 2017, Ottawa (Canada).
  - **MCDM Conference**, *On the effectiveness of debiasing overprecision in probabilistic estimates of multiple impacts*, talk given together with Professor Gilberto Montibeller, 10-14 July 2017, Ottawa (Canada).

- *Cognitive biases in spatial risk analysis: design of an experiment*, talk presented at the Conference on Building expertise for Innovation, April 25-27, 2017, Aalto University, Espoo (Finland).

**2016**

- **INFORMS Annual Conference**, *Behavioural Issues in Spatial Decision-making Processes*, talk presented under a session in the Multiple Criteria Decision Making cluster, 13-16 November 2016, Nashville (USA).

- 84th meeting of the European Working Group on Multicriteria Decision Aiding, *Generating combinations of alternatives for urban regeneration: a Decision Analysis approach*, 22-24 September 2016, Vienna (Austria).

- OR58 Annual Conference, *Debiasing overconfidence*, talk given together with Professor Gilberto Montibeller, 6-8 September 2016, Portsmouth (UK).

- OR58 Annual Conference, *How to innovatively design public policies?*, 6-8 September 2016, Portsmouth (UK).

- OR58 Annual Conference, *Defining, Analyzing and Evaluating Coalitions of Projects*, talk given together with Professor Alessandra Oppio, 6-8 September 2016, Portsmouth (UK).

- ISAHP2016 Conference, *Integrating collaborative problem structuring techniques and the Analytic Hierarchy Process: the case of the new Regional Transportation Plan for 2050 in the Piedmont Region*, 4-7 August 2016, London (UK).

- ISAHP2016 Conference, *Environmental Impact Assessment for tall buildings: the application of the ANP for the first skyscraper in the city of Turin (Italy)*, 4-7 August 2016, London (UK).

- *Le nuove sfide per la valutazione*, talk given at the Workshop “Costruzione strategica e valutazione integrata delle trasformazioni urbane diffuse”, Politecnico of Milano, May 2016 (Italy).

- Summer School on Behavioural Operational Research, *Behavioural Issues in Environmental Decision Making*, research pitch, 16-20 May 2016, Helsinki (Finland).

- 83<sup>rd</sup> meeting of the European working group on Multicriteria Decision Aiding, *How to innovatively design public policies*, 31 March – 2 April, 2016, Barcellona (Spain).

**2015**

- **INFORMS Annual Conference**, *Key Challenges and Meta-choices In Designing Spatial Multi-criteria Evaluations*, talk presented under a session in the Multiple Criteria Decision Making cluster, 1-4 November 2015, Philadelphia (USA).

- **INFORMS Annual Conference**, *From Actors' Analysis to Multicriteria Decision Aiding: A Mixed Method Approach*, 1-4 November 2015, Philadelphia (USA).
- International Conference on Computational Science and its applications, *Calculating Composite Indicators for Sustainability*, talk given together with Dr Marta Bottero, 22- 25 June 2015, Banff (Canada).
- 27<sup>th</sup> European Conference on Operational Research (EURO), *Land suitability analysis for wetland location: a spatial multicriteria approach*, talk given together with Professor Elena Comino, 12-15 July 2015, Glasgow (UK).
- 27<sup>th</sup> European Conference on Operational Research (EURO), *A multi-stakeholders decision process to support urban planning strategies*, talk given together with Dr. Marta Bottero, 12-15 July 2015, Glasgow (UK).
- 23<sup>rd</sup> International Conference on Multiple Criteria Decision Making MCDM 2015, *Urban regeneration, industrial heritage and local communities: an application of the Social Multi-Criteria Evaluation*, 2-7 August 2015, Hamburg (Germany).
- 81<sup>st</sup> meeting of the European working group on Multicriteria Decision Aiding, *Learning the Parameters of a Ranking Model Using Multiple Reference Points: A Case Study Dealing with Large Datasets*, talk given together with Dr. Liu Jinyan, 26-28 March 2015, Annecy (France).
- COST Action FP1207 (ORCHESTRA) Workshop on Forestry modeling for integrated policy, *Report on 2 STSMs presenting ontology development work*, talk given together with Dr. Luc Boerboom, 9-11 March 2015, Cascais (Portugal).

**2014**

- Seminar “Analisi Multicriteri, Valutazione, Processi decisionali”, *The Multiple Criteria Hierarchy Process approach for the valorization of historical buildings*, talk given together with Salvatore Corrente, 29-30 May 2014, Turin (Italy).
- First International Symposium on New Metropolitan Perspectives, *From indicators to composite indexes: an application of the Multi-Attribute Value Theory for assessing sustainability*, talk given together with Dr Marta Bottero, 6-8 May, 2014, Reggio Calabria (Italy).
- 79<sup>th</sup> Meeting of the European Working Group «Multiple Criteria Decision Aiding», *Multiple Criteria Hierarchy Process applied to decision about the re-use of historical buildings*, talk given together with Dr Marta Bottero, 3-5 April, 2014, Athens (Greece).

**2013**

- 78<sup>th</sup> Meeting of the European Working Group «Multiple Criteria Decision Aiding», *An extension of Electre III for dealing with a multiple criteria environmental problem with interaction effects between criteria*, talk given together with Dr Marta Bottero, 24-26 October 2013, Catania (Italy).

- Participation in the DIMACS/CCICADA Workshop on Urban Planning for Climate Events, 23-24 September 2013, New York (USA).

- 22<sup>nd</sup> International Conference on Multiple Criteria Decision Making, *Best Practices for Spatial Multicriteria Evaluation: a Critical Review*, talk given together with Professor Gilberto Montibeller, 17-21 June 2013, Málaga (Spain).

- FORSYS 2013 Conference about Decision Support Systems for sustainable forest management, *Actor Network Theory Perspective on a Forestry Decision Support System Design*, talk given together with Dr Luc Boerboom, 24-26 April 2013, Umea (Sweden).

- 77<sup>th</sup> meeting of the European working group on Multicriteria Decision Aiding, *Decision making and cultural heritage: an application of the Multi Attribute Value Theory for the reuse of historical buildings*, 11-13 April 2013, Rouen (France).

## 2012

- *Multicriteria- Spatial Decision Support Systems: methodological background and case study application*, talk given at the seminar “Multidimensional Evaluation of projects: theory and practice” within the project “Multicriteria Decision Analysis for Cultural Heritage” of the Alta Scuola Politecnica (scientific coordinator: Dr. Alessandra Oppio), 2 May 2012, Turin (Italy).

- Participation in the workshop “Vulnerability Assessments”, Cross Project Exchange in SIC Adapt, 17 February 2012, Liverpool (UK).

## 2011

- 74<sup>th</sup> meeting of the European working group on “Multiple Criteria Decision Aiding”, *Towards an integration in sustainability assessment: the application of the Choquet integral for siting a waste incinerator*, 6-8 October 2011, Yverdon Les Bains (Switzerland).

- 1<sup>st</sup> International Workshop on Urbanization and Cultural Landscape, an Iranian- Italian Scientific Cooperation Programme, *Application of the Conjoint Analysis to the “Porto Venere” UNESCO site*, 4-16 July 2011, SiTi, Torino.

- 21<sup>st</sup> International Conference on Multiple Criteria Decision Making, *A Multicriteria- Spatial Decision Support System (MC-SDSS) development for siting a landfill in the Province of Torino (Italy)*, 13–17 June 2011, Jyväskylä (Finland).

- *A Multicriteria- Spatial Decision Support System (MC-SDSS) development for siting a landfill in the Province of Torino (Italy)*, talk given at the seminar “Spatial Decision Support Systems: applications and perspectives”, 9 June 2011, SiTi, Torino.

## 2010

- 2<sup>nd</sup> International Conference on Applied Operational Research (ICAOR), *Exploring Benefits, Opportunities, Costs and Risks of territorial transformations: a combined Analytic Network Process (ANP) model and*

*Driving forces- Pressures - State - Impacts - Responses (DPSIR) framework for Environmental Assessment, 25- 27 August 2010, Turku (Finland).*

**2008**

- Participation in the international workshop “Transmitting Sustainable Cities”, 11-16 February 2008, Turin (Italy).

## 14 Teaching responsibilities in Risk and Decision Analysis, as well as in Behavioural Decision Science

### International teaching experience (USA)

April 2014 **Invited lecturer.** “Integrating Multicriteria Analysis and Geographic Information Systems: An Application of Spatial ANP” for the MBA course “Decision Making for Leaders” (Course coordinator: Professor Enrique Mu, Carlow University, Pittsburgh, USA) (1 hour lecture).

October 2013 **Invited lecturer.** “Integrating Multicriteria Analysis and Geographic Information Systems: an application of spatial ANP” for the MBA course “Decision making in complex environments with the Analytic Network Process (ANP)” (Lecturer: Emeritus Professor Thomas Saaty), University of Pittsburgh, KATZ Department of Business, USA (1 hour lecture).

### International teaching experience (UK) – executive level

February 2018 **Lecturer. Guardian Masterclasses.** Course title: *How to make better decisions.* **The Guardian, UK.**

May 2017 **Lecturer. Guardian Masterclasses.** Course title: The one-day MBA: The fundamentals of business taught by world-leading academics. Title of the lecture: *how to make better decisions.* **The Guardian, UK.**

June 2014, June 2015, June 2016, June 2017, November 2017 **Teaching assistant and class teacher.** Course title: Executive Summer School on Strategic Decision Making. **London School of Economics and Political Science, UK** (Lecturers: Prof. Barbara Fasolo and Prof. Gilberto Montibeller). 96% of received evaluations are Excellent/very good.

### International teaching experience (UK) – master and undergraduate level

2017-2018 **Responsible lecturer and class teacher.** Course title: Analytics for Strategic Decisions. **London School of Economics and Political Science, UK.**

2017 **Responsible lecturer.** Course title: *Applied Policy: Decision Analysis.* Blavatnik School of Government, **University of Oxford, UK** (March 2017).



- 2015/2016 & 2016/2017 **Responsible lecturer and class teacher.** Course title: Risk and Decision Analysis for Management and Policy<sup>15</sup>. **London School of Economics and Political Science, UK.**
- 2015/2016 & 2016/2017 **Class teacher.** Course title: Behavioural Decision Science for Management and Policy. **London School of Economics and Political Science, UK** (Lecturer: Professor Barbara Fasolo).
- July 2015, July 2016, July 2017 **Responsible lecturer and class teacher.** Course title: Summer School on Judgment and Decision Making for Management. **London School of Economics and Political Science, UK** (with Professor Barbara Fasolo) (Overall evaluation: 95% very good/good on a scale that ranges from very good to very poor).
- July 2014 **Class teacher.** Course title: Summer School on Judgment and Decision Making for Management. **London School of Economics and Political Science, UK** (Lecturers: Prof. Barbara Fasolo and Prof. Gilberto Montibeller) (Overall evaluation: 83% very good/good on a scale that ranges from very good to very poor).

### International teaching experience (EUROPE) – executive and practitioners’ level

- 2017 **Lecturer (responsible teacher).** Course title: Multi Criteria Analysis training. Stockholm International Water Institute (SIWI). January 17, 2017, Beirut (Lebanon).
- 2016 and 2017 **Lecturer.** Course title: Spatial Multicriteria analysis for environmental decision making. 17-19 February 2016 and 6-8 September 2017. Trento Italy (with Professor Davide Geneletti).
- October 2014 – April 2015 **Teaching assistant** for the e-learning course titled “Spatial Decision Support Systems” in the framework of the project “Achieving sustainable urban development” for UN Habitat in Rwanda (course coordinator: Dr. Luc Boerboom).
- 7-8 February 2014 **Teaching assistant.** Course title: Decision Analysis in the legal context. CMS Legal Services EEIG, DR Academy, **Amsterdam**, the Netherlands (Lecturer: Professor Gilberto Montibeller).

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<sup>15</sup> Dr Ferretti has received **8 nominations** as “**inspirational teacher**” for the LSE Student-Led Teaching Excellence Awards in 2016. In May 2017 Dr Ferretti was **awarded the LSE Student-led Teaching Excellence Award 2017**, in the category of Inspirational Teaching.

International teaching experience (EUROPE) – master level

- |  |   |
|--|---|
| 2015                                       | <b>Lecturer.</b> Course title: Decision Theory. <b>Paris Descartes</b> (with Professor Alexis Tsoukiàs).                        |
| 2014-2015, 2015-2016, 2016-2017, 2017-2018 | <b>Lecturer (responsible teacher).</b> Course title: Decision Modelling. <b>Ecole Centrale Paris, France</b> (48 hours course). |

## 15 Teaching responsibilities in economic appraisal and project impact assessment procedures

### Responsible lecturer of full courses

September 2014- February 2015      **Lecturer (responsible teacher).** Course title: Economic appraisal. Technical University of Turin (80 hours course)

### Lectures and practical classes for Bachelor of Science and Master of Science courses

May 2015      **Lecture** “Multicriteria-Spatial Decision Support Systems” in the course “Architecture and urban economics. Real Estate evaluation” (responsible teacher: Professor Patrizia Lombardi), Master of science in Architecture at the Politecnico of Torino.

2014- 2015      **Academic Tutor** in the “Alta Scuola Politecnica (ASP)” – School for young talents- of the Politecnico of Torino and the Politecnico of Milano (Italy) for the course “The adaptative reuse of historical buildings”.

2014      **Teaching assistant** for the course “Beijing brownfields. Urban regeneration and redevelopment of abandoned industrial sites in China”. Master of science in Architecture at the Politecnico of Torino (Italy).

2012-2013      **Teaching assistant** for the course "MCDA for cultural heritage: Multi-criteria decision analysis for cultural heritage conservation and development", “Alta Scuola Politecnica (ASP)” – School for young talents- of the Politecnico of Torino and the Politecnico of Milano (Italy).

2012/2013- 2013/2014      **Teaching assistant** lecturing in the course “Theories and tools for real estate analysis”. Bachelor of science in Architecture, Politecnico of Torino (Italy) (responsible lecturer: Professor Riccardo Roscelli).

From 2007 to 2015      **Teaching assistant** lecturing in the course “Environmental Assessments”, Master of Science in Environmental Engineering, Politecnico of Torino (Italy) (responsible lecturer: Professor Giulio Mondini).

### Lectures and practical classes for PhD courses

2012/2013      **Lecture** “Multicriteria- Spatial Decision Support Systems” for the PhD course “Evaluation tools and techniques”, PhD

course in Environment and Territory, Politecnico of Torino (Italy).

From 2007 to 2013

**Teaching assistant** for the PhD course “Project/policy/programmes Impact Assessment”, PhD course in Environment and Territory, Politecnico of Torino (Italy) (responsible lecturer: Professor Giulio Mondini).

2009

**Lecture** “Application of the Analytic Network Process (ANP) to two urban transformation projects” within the “Summer School on Real Estate Appraisal for P.h.D. Students – S.S.R.E.A.”, Bressanone (Italy).

### Lectures and practical classes for Masters and Professional courses

2014

**Lecture** “Evaluation methods for supporting territorial decision making” for the Third International Workshop on Urbanization and Cultural Landscape "Executive Programme in Management of Complex Environments", II.TED International School in Heritage Management, Turin, September 10, 2014.

**Lecture** “Spatial Decision Support Systems” for the Master in Architectural Heritage and Landscape, Politecnico of Torino (Italy) (Course coordinator: Professor Carlo Tosco).

2010/2011, 2011/2012

**Teacher** for the course “Procedures of waste management” in the training programme “Technician in environment, energy and security” (course coordinator: Dr. Mariangela Pes). Professional training agency En.F.A.P Piemonte (Italy).

2010 and 2012

**Teacher** for the 4<sup>th</sup> and 5<sup>th</sup> Course of Advanced Training “Management of the territory” (Course coordinator for the Turin training unit: Professor Giulio Mondini). Professional training agency Consorzio Promos Ricerche (Italy).

2009/ 2010, 2011/2012,  
2012/2013, 2013/2014

**Teacher** for the course “Principles of Environmental Impact Assessment” in the training programme “Technician in environment, energy and security” (Course coordinator: Dr. Mariangela Pes). Professional training agency En.F.A.P Piemonte (Italy).

2013/2014, 2014/2015

**Teacher** for the course “Environmental audit” in the training programme “Technician in environment, energy and security” (Course coordinator: Dr. Mariangela Pes). Professional training agency En.F.A.P Piemonte (Italy).

## 16 Supervision of dissertations

- **Supervision of 6 MSc Dissertations in Management** (London School of Economics and Political Science, London, UK) and **3 Summer Projects** in Management (London School of Economics and Political Science) (from September 2015 to September 2017). The project jointly developed with one of the MSc student has been selected among the finalists for the **INFORMS 2017 Decision Analysis Practice Award** and has been awarded the first position (number of received applications: 19).
- **Supervision of 1 MSc Dissertation in Decisions Modelling** at Ecole Centrale (Paris, France). This dissertation has been awarded the **prize "Prix spécial du jury"** in the context of the competition "Boost Your Code 2015" by **INRIA** and has received the **Best 2015 MSc thesis award** within the IT4BI Master at Ecole Centrale.
- **Supervision of 10 BSc and 2 MSc thesis dissertations** in Environmental Engineering (Politecnico of Torino, Italy). One of the two MSc students has been awarded the **best MSc 2016 Thesis Dissertation Award by the Italian Association of Regional Sciences (AISRe)** (September 2016). Moreover, the project jointly developed with the student has been selected among the finalists for the **INFORMS 2016 Decision Analysis Practice Award** (where it has been awarded the runner up position) and is currently selected among the semi-finalists for the **INFORMS 2018 Innovative Applications of Analytics Award** (number of received applications: 29). The work jointly developed with one of the BSc students has been selected among the finalists for the **INFORMS 2017 Innovative Applications of Analytics Award** and has been awarded the second position.
- **Co-supervision of PhD students: 1 PhD student** in Environment and Territory – decision analysis (Politecnico of Torino, Italy) and **two PhD students** in Cultural Heritage management from the Politecnico of Torino, one jointly with Kent University (UK) and one jointly with Sorbonne University in France (April 2011 – present).

## PhD Evaluation Boards

- November 2017: Appointed member of the PhD Examination board by the Doctoral School of the Politecnico of Torino. PhD Candidate: Federica Appendino, title of the thesis “Challenges and opportunities for urban heritage conservation in the XXI century: historic city and sustainability. From the French experience to the Paris case.”

## 17 Awards and appointments

- November 2017: the project titled “Integrated analytics as a driver for rural regeneration” is selected among the **semi-finalists for the INFORMS 2018 Innovative Applications of Analytics Award** (number of received applications: 29, number of finalists to be selected: 6).
- October 2017: the project titled “How to improve educational programs for underprivileged children? The impacts of value-focused Decision Analysis” is the **winner of the INFORMS 2017 Decision Analysis Practice Award**<sup>16</sup> (number of received applications: 19, number of finalists: 3).
- July 2017: the project titled “How to improve educational programs for underprivileged children? The impacts of value-focused Decision Analysis” is selected among the finalists for the **INFORMS 2017 Decision Analysis Practice Award** (number of received applications: 19).
- May 2017: **LSE Student-led Teaching Excellence Award 2017**, in the category of Inspirational Teaching.
- May 2017: London School of Economics and Political Science, Department of Management: **Lent Term 2016-2017 Top Ten Teachers** for the course “Risk and Decision Analysis for Management and Policy” (for both the undergraduate course and the postgraduate course)<sup>17</sup>.
- April 2017: the project titled “Combining Multi Criteria Analysis with interactive visualization and real-time sensitivity simulations to support the regeneration process of disused railways” is awarded the 2<sup>nd</sup> position within the **2017 INFORMS Analytics Society Innovative Applications in Analytics Award**.
- December 2016: the project titled “Combining Multi Criteria Analysis with interactive visualization and real-time sensitivity simulations to support the regeneration process of disused railways” is selected as a **finalist** for the **2017 INFORMS Analytics Society Innovative Applications in Analytics Award**.
- November 2016: the project titled “From Spatial SWOT Analysis to MCDA and choice experiments: an integrated approach for historical heritage management in a new World Heritage site” is selected as **runner up** for the **2017 INFORMS Decision Analysis Practice Award**.
- October 2016: the paper titled “From Spatial SWOT Analysis to MCDA and choice experiments: an integrated approach for historical heritage management in a new World Heritage site” is selected as a **finalist** for the **2017 INFORMS Decision Analysis Practice Award**.
- October 2016: the abstract titled “Combining Multi Criteria Analysis with interactive visualization and real-time sensitivity simulations to support the regeneration process of disused railways” is selected as a **semi-finalist** for the **2017 INFORMS Analytics Society Innovative Applications in Analytics Award**.
- September 2016: the paper titled “From stakeholders’ analysis to cognitive mapping and Multi-Attribute Value Theory: An integrated approach for policy support” (author: Valentina Ferretti) published in 2016 in the European Journal of Operational Research is included in the **Editors’ Choice Articles** on the European Journal of Operational Research website.
- June 2016: Dr Valentina Ferretti receives **8 nominations as “inspirational teacher”** for the LSE Student-Led Teaching Excellence Awards 2016.
- November 2015- present: Elected Secretary/Treasurer for the MCDM section in INFORMS.
- January 2015 – January 2021: Dr Valentina Ferretti obtains the **Italian teaching qualification at the level of Associate Professor**.

<sup>16</sup> <https://www.informs.org/Recognizing-Excellence/Community-Prizes/Decision-Analysis-Society/DAS-Practice-Award>

<sup>17</sup>

<http://lse.newswave.com/ManagementMatterNewsletterDESIGNTEST/2gu9hij5ta3r8n71s81s11?email=true&a=2&p=1670911&t=569098>

- July 2014: **best paper award** for the article titled “An integrated approach for exploring opportunities and risk of complex territorial systems” (authors: Valentina Ferretti, Marta Bottero and Giulio Mondini) which has been presented at the ICCSA 2014 – International Conference on Computational Science and its Applications, Guimaraes (Portugal), 30 June – 3 July 2014.
- 2012-2015: “**Leading JMCDA Article**” acknowledged to the paper titled “An analytic network process-based approach for location problems: the case of a new waste incinerator plant in the Province of Torino (Italy)” (authors: Marta Bottero and Valentina Ferretti) published in the Journal of Multi-criteria Decision Analysis.
- September 2012: **Best Ph.D. thesis award** (Giorgio Leonardi’s prize within the XXXIII Annual Scientific Conference of the Italian Association on Regional Sciences - AISRe, 13-15 September 2012, Rome, Italy). Title of the thesis: *Multicriteria- Spatial Decision Support Systems (MC-SDSS): towards an integrated approach for sustainability assessments of territorial transformations*.
- June 2011: **Wiley Practice Prize for the best paper** presented at the 21<sup>st</sup> International Conference on Multiple Criteria Decision Making (13–17 June 2011, Jyväskylä, Finland). Title of the paper: A Multicriteria- Spatial Decision Support System (MC-SDSS) development for siting a landfill in the Province of Torino (Italy).
- June 2014: awarded with a certificate of **Reviewing Excellence** from the Journal “Ecological Indicators”.
- May 2014: **Honorary reviewer** for the Journal of Contemporary Management.
- 2011- 2013 **winner of the selection** for the participation in the “High level international training for problem solving and project management” project of the Politecnico of Torino (BAF, <http://dottorato.polito.it/BAF.html>) (scientific coordinator: Professor Mario Calderini).
- 2010-2011 **winner of the competition** for PhD Students of the Politecnico of Torino for the “Think Tank” project between SOGES S.p.A. and the PhD School of the Politecnico of Turin.

## 18 Memberships

- American INFORMS Society (since 2012)
- EURO Working Group on MCDA (since 2012)
- International Society on Multiple Criteria Decision Making (MCDM), <http://www.mcdmsociety.org/> (since 2011)
- Forest DSS Community of Practice, <http://forestdss.org/drupal/> (since 2013)
- Euro Working Group on Decision Support Systems (since 2015)
- Women in OR/MS Forum (WORMS) (since 2017)
- Analytics Society (since 2017)

## 19 Languages

- Italian (mother tongue)
- English (Listening: C2<sup>18</sup>, Reading: C2, Speaking: C2, Writing: C2)
- French (Listening: A1, Reading: A1, Speaking: A1, Writing: A1)
- Swedish (Listening: A1, Reading: A1, Speaking: A1, Writing: A1)

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<sup>18</sup> Common European Framework of Reference for Languages