Dr. Marco Cinelli   Curriculum Vitae – September 2024

Position	**Assistant Professor**
Nationality	Italian
E-mail	m.cinelli@luc.eleidenuniv.nl
Born	02 Nov 1986
Profile	Personal website	Google Scholar	LinkedIn	Web of Science	ORCID	Scopus

Work address
Leiden University College (Office 4.02)
Anna van Buerenplein 301
2595DG, The Hague, The Netherlands

I am an **Assistant Professor** at Leiden University College (LUC) in the Hague, where I lead the interdisciplinary laboratory Decision Engineering for SustaInability and REsilience (DESIRE).

I am also a **guest researcher** at the Institute of Environmental Sciences (CML) of Leiden University and **Co-Chair** of the **Weighting Subtask** of the Global Life Cycle Impact Assessment project of the Life Cycle Initiative, United Nations Environment Programme.

Expertise*:*

- Development of Decision Support Systems (DSS) with Multiple Criteria Decision Analysis/Aiding (MCDA)
- *Main frameworks*: sustainability, resilience and risk assessment
- *Main application areas*: energy systems, materials and processes development, nature-based solutions, chemical safety, technologies assessment, medical devices

Research tools: (i) decision hierarchies, (ii) computer-based performance and impact assessment modeling (iii) reliability, sensitivity and uncertainty analysis, (iv) mathematical aggregation operators, (v) systematic literature reviews.

Education

Ph.D. Engineering   **Oct 2012 – Jul 2016**
WMG Department - University of Warwick, Coventry (UK)
Advisors: Prof. Kerry Kirwan; Prof. Stuart Coles
- Thesis: "Advancing Sustainable Nanotechnology with Multi-Criteria Decision Aiding (MCDA)"
- Development of comprehensive set of sustainability assessment criteria for nanoproducts
- Development of classification models based on MCDA to evaluate the synthesis of silver nanoparticles processes

M.Sc. - Master Degree in Environmental Sciences   **Sep 2009 – Jun 2012**
Ca' Foscari University, Venice (Italy)
- *Curriculum*: Sustainable Development
- *Thesis*: Risk Assessment of Engineered Nanomaterials. Case Study: A Multiple Criteria Decision Aiding-based Model for Ranking and Prioritization of Occupational Exposure Scenarios to Nanomaterials *(110/110 with honors). Advisor*: Prof. Antonio Marcomini

Exchange semester within the Master Degree   **Apr 2010 – Nov 2010**
Hiroshima University, Hiroshima (Japan)

B.Sc. - Bachelor Degree in Environmental Sciences   **Sep 2005 – Jul 2008**
Padua University, Padua (Italy)
- *Thesis*: Fossil fuels and the main sources of renewable energy *(110/110 with honors)*

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Professional experience

Guest Researcher   **Nov 2023 – Present**
Institute of Environmental Sciences (CML), Leiden University, Leiden (The Netherlands)
- Development of Decision Support Systems (DSS) based on Life Cycle Sustainability Assessment with Multiple Criteria Decision Analysis (MCDA)

Assistant Professor   **Oct 2021 – Present**
Leiden University College, The Hague (The Netherlands)
- Provide state-of-the-art, adaptable and transparent strategies to formulate, model and support better decision-making
- Develop and apply decision support tools to tackle sustainability and resilience-related challenges
- Train future decision engineers to tackle complex decision-making

Co-Chair Weighting Subtask   **Apr 2020 – Present**
Life Cycle Initiative, United Nations Environment Programme
- Life Cycle Impact Assessment (LCIA) developer, part of Global LCIA guidance Phase 3 project, aiming at establishing a comprehensive, consistent and global environmental method to support life cycle-based environmental evaluations

Associate Member   **Sep 2018 – Present**
Applied Biomedical Signal Processing and Intelligent eHealth (ABSPIeH) lab, University of Warwick, Coventry (UK)
- Use of MCDA approaches and methods to support the development of medical devices suitable for their consistent and reliable use in low- and middle-income settings; *link*

Marie Skłodowska-Curie Global Fellow   **Sep 2018 – Sep 2021**
U.S. Environmental Protection Agency, Cincinnati, OH (USA), Paul Scherrer Institute, Villigen PSI (Switzerland) & Poznań University of Technology, Poznań (Poland)
Advisors: Dr. Michael Gonzalez; Dr. Peter Burgherr; Prof. Roman Słowiński; Asst. Prof. Miłosz Kadziński
- Multiple Criteria-based materials and technologies assessment, with a specific focus on land remediation technologies, energy systems analysis and safety of chemicals from a life-cycle perspective
- Expansion of a network of researchers, analysts and policy makers to advance the scientifically meaningful use of MCDA in sustainability, resilience and risk research

Guest Teacher   **Feb 2019 – Jun 2019 & Mar 2020 – Jun 2020**
London School of Economics and Political Science (LSE), London (UK)
- Teaching and marking as part of the bachelor and master courses "Strategic Decision Making"

Visiting Scientist (self-created collaboration)   **Jun - Jul 2019**
Stanford Center for Biomedical Informatics Research, Stanford University, Palo Alto, CA (USA)
- Creation of a decision support framework based on a taxonomy of decision analysis
- Development of a modelling vocabulary to lead traceable and reproducible multiple criteria-based decision making

Postdoctoral Researcher   **Mar 2017 – Aug 2018**
Future Resilient Systems (FRS), ETH Zürich, Singapore-ETH Centre, Singapore
Advisors: Dr. Peter Burgherr; Dr. Matteo Spada
- Development of metrics and decision support tools for the resilience assessment of energy systems
- Development of classification models for risk assessment of energy accidents

Visiting Scientist (self-created collaboration)   **Aug 2016 – Feb 2017**
Joint Research Centre, European Commission - Directorate D - Sustainable Resources, Bio-Economy Unit, Ispra (Italy)
Advisor: Dr. Serenella Sala
- Support the development of a weighting scheme for life cycle impact assessment categories in the Environmental Product Footprint methodology, based on MCDA
- Creation of a research agenda of key challenges to be tackled to maximize the practical use of life cycle assessment in the context of European Commission's Better Regulation package

Early Career Fellow   **Apr 2016 – Feb 2017**
Institute of Advanced Study - University of Warwick, Coventry (UK)

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- Use of MCDA to perform sustainability assessments of products/process systems (in collaboration with the U.S. Environmental Protection Agency and the Institute of Computing Science in Poland)
- Creation of a network of sustainability and decision support analysts to advance the scientifically meaningful use of MCDA in sustainability research

Research Assistant   **Apr 2016 – Feb 2017**
WMG Department - University of Warwick, Coventry (UK)
Advisors: Prof. Kerry Kirwan; Prof. Stuart Coles
- Development of life cycle sustainability assessment capabilities within the Sustainable Materials and Manufacturing research group at WMG Department
- Environmental impact assessment of silver nanoparticles synthesis and evaluation based on stochastic MCDA
- Development of a decision support model for materials management - Criticality evaluation based on economic importance and vulnerability criteria

Visiting Scientist (self-created collaboration as part of Ph.D.)   **Jul 2014 – Nov 2014**
U.S. Environmental Protection Agency, Cincinnati, OH (USA)
Advisors: Dr. Rajender Varma; Dr. Mallikarjuna Nadagouda
- Development of a classification model for synthesis processes of silver nanoparticles based on green chemistry

Visiting Scientist (self-created collaboration as part of Ph.D.)   **May 2014 – Jun 2014**
Institute of Computing Science - Poznań University of Technology, Poznań (Poland)
Advisors: Prof. Roman Słowiński; Asst. Prof. Jerzy Błaszczyński
- Training in Multiple Criteria Decision Aiding methods to develop decision support models for sustainability assessments
- Development of classification model based on MCDA for workers' safety management during nanomaterials synthesis

Research Assistant (departmental agreement as part of Ph.D.)   **May 2014 – Nov 2014**
WMG Department - University of Warwick, Coventry (UK)
- Planned and administered the international research collaborations in Poland and USA as above
- Collaboration management with Sustainable Nanotechnology Organization (USA) to foster responsible nanotechnology

Term-contract Researcher   **Jul 2012 – Sep 2012**
Veneto Nanotech, Padua (Italy)
Advisor: Prof. Antonio Marcomini
- Co-developed model based on MCDA for exposure management to nanomaterials in the workplace

Trainee   **Aug 2011 – Jun 2012**
Department of Environmental Sciences - University Ca' Foscari, Venice (Italy)
- Collaborated in the development of a decision support approach to perform risk assessment of nanomaterials

Funding (~2.3 million Euro) & Projects

Short description of the project	My role / My position	Funding body / amount
Granted in May 2024 (dates TBD) **Lasers4MaaS research project** *Leiden University College & Institute of Environmental Sciences, Leiden University (NL) and 14 international partners* - European Commission's Horizon Europe research and innovation action (RIA) - 42 months project - Focus of the project: Enable a 6-point strategy (reconfigure, connect, control, predict, improve, comply) to operationalise the smart, decentralised and sustainable factories of the future.	**My role:** Co-PI **My position:** WP leader	**Funding from:** European Commission **Funding amount for Leiden University:** 609.000 Euro (overall project ~6.8 million Euro)

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Main activities: • WP leaders for development of decision support systems based on performance, cost, sustainability and circularity assessment		
26/09/2018 – 25/09/2021 **EU Marie Skłodowska-Curie Global Fellowship** *U.S. Environmental Protection Agency, Cincinnati, OH (USA), Paul Scherrer Institute, Villigen PSI (Switzerland), Poznań University of Technology, Poznań (Poland), Stanford Center for Biomedical Informatics Research, Stanford University, Palo Alto, CA (USA)* • Individual Fellowship awarded to experienced researchers by the European Commission's Horizon 2020 research funding scheme for excellent science • Outgoing phase for 23 months at U.S. Environmental Protection Agency (USA), secondment of 6 months at the Paul Scherrer Institute (CH) and incoming phase for 7 months at the Institute of Computing Science, Poznań University of Technology (PL) • Short term research visit at Stanford Center for Biomedical Informatics Research, Stanford University, Palo Alto, CA (USA) • <u>Focus of the project</u>: Sustainability and Resilience Assessment based on Multiple Criteria Decision Analysis (MCDA) Main activities: • Development of a taxonomy (i.e., vocabulary) of characteristics/features to describe and help managing complex decision-making problems • Development of a framework and intelligent decision support system to recommend Multiple Criteria Decision Analysis (MCDA) methods • Multiple Criteria-based materials and technologies assessment, with a specific focus on land remediation technologies, energy systems analysis and safety of chemicals from a life-cycle perspective • Expansion of a network of researchers, analysts and policy makers to advance the scientifically meaningful use of MCDA in sustainability, resilience and risk research • Development of guidelines to select the most relevant methodologies to determine weights and possibly aggregate results for different Life Cycle Impact Assessment (LCIA) decision contexts regarding the intended use of the Life Cycle Assessment (LCA) study • Development of a discrete and consistent set of weights covering all impact categories as selected by the LCIA initiative • Development of probability distribution for each weight per impact category as selected by the LCIA initiative	**My role:** PI **My position:** Marie Skłodowska-Curie Global Fellow	**Funding from:** European Commission **Funding amount:** 227.000 Euro
01/09/2020 – 28/02/2021 **Scientific Exchange** *Paul Scherrer Institute, Villigen PSI (Switzerland)* • Competitively awarded scientific collaboration grant to strengthen Swiss research capabilities Main activities: • Develop and advance decision support systems for resilience and sustainability-based technology management, development strategies • Define strategies to tackle dynamic and evolving decision-making processes	**My role:** Co-PI **My position:** Visiting Scientist	**Funding from:** Swiss National Science Foundation **Funding amount:** 17.200 Euro
01/04/2016 – 01/02/2017	**My role:**	**Funding from:**

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Early Career Fellowship & Research Assistantship *Institute of Advanced Study (IAS) & WMG Department, University of Warwick, Coventry (UK), Joint Research Centre, European Commission - Directorate D - Sustainable Resources, Bio-Economy Unit, Ispra (Italy)* • University-wide post-doctoral fellowship competition, focused on enhancement of academic career employability Main activities: • Use of MCDA to perform sustainability assessment of products/process systems (in collaboration with the U.S. Environmental Protection Agency and the Institute of Computing Science at Poznan university of Technology) • Creation of a network of sustainability and decision support analysts to advance the scientifically meaningful use of MCDA in sustainability research • Development of life cycle sustainability assessment capabilities within the Sustainable Materials and Manufacturing research group at WMG Department • Environmental impact assessment of silver nanoparticles synthesis and evaluation based on stochastic MCDA • Development of a decision support model for materials management - Criticality evaluation based on economic importance and vulnerability criteria • Support the development of a weighting scheme for life cycle impact assessment categories in the Environmental Product Footprint methodology, based on MCDA • Creation of a research agenda of key challenges to be tackled to maximize the practical use of life cycle assessment in the context of European Commission's Better Regulation package	PI **My position:** Early Career Fellow and Research Assistant	Institute of Advanced Study & WMG Department - University of Warwick, Coventry (UK) **Funding amount:** 13.100 Euro
01/10/2012 – 01/07/2016 **PhD project** *WMG Department, University of Warwick, Coventry (UK), U.S. Environmental Protection Agency, Cincinnati, OH (USA), Institute of Computing Science - Poznań University of Technology, Poznań (Poland)* • Competitively awarded doctoral scholarship as part of international interdisciplinary competition of the EPSRC research awards scheme Main activities: • Thesis: "Advancing Sustainable Nanotechnology with Multi-Criteria Decision Aiding (MCDA)" • Development of comprehensive set of sustainability assessment criteria for nanoproducts • Development of classification models based on MCDA to evaluate the synthesis of silver nanoparticles processes • Planned and administered international research collaborations in Poland and USA • Collaboration management with Sustainable Nanotechnology Organization (USA) to foster responsible nanotechnology	**My role:** PI **My position:** Ph.D. Researcher	**Funding from:** UK Engineering and Physical Sciences Research Council (EPSRC) and WMG Department, University of Warwick, Coventry (UK) **Funding amount:** 78.000 Euro
01/01/2018 – 01/12/2019 **CREDENCE Research project** *WMG Department, University of Warwick, Coventry (UK)* • Postdoc position *not accepted* because I moved to FRS programme with	**My role:** Grant main writer **My position:**	**Funding from:** Catapult UK Programme **Funding amount:**

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ETH Zürich at Singapore-ETH Centre Main activities: • Preparation and writing of a successful project (CREDENCE - CREating a Decision-ENabled Circular Economy) proposal on the development of a decision support system for implementation of circular economy principles in automotive industry	Not applicable as I did not accept it	1.430.00 Euro

Publications list

Citations: Web of Science: 1301; Scopus: 1554; Google Scholar: 2411

h-index: Web of Science: 17; Scopus: 18; Google Scholar: 20

Journal papers *(JP)* *Corresponding author

Peer-reviewed

Under review (Contact me for more information)

JP 28. Arias, A.*; **Cinelli, M.**; Moreira, M. T.; Cucurachi, S. *A composite Indicator for Evaluating Safety and Sustainability by Design and Circularity in Emerging Technologies.*

Published

2024

JP 27. Subaşı, A.B.; Askham, C.; Sandorf, E.D.; Dias, L.C.; Campbell, D.; Taş, E.F.; Itsubo, N.; Nagawa, C.B.; Kyarimpa, C.M.; Djerma, M.; Bazie, B.S.R.; **Cinelli, M.*** *Weighting factors for LCA - A new set from a global survey.* The International Journal of Life Cycle Assessment. https://link.springer.com/article/10.1007/s11367-024-02330-w

2023

JP 26. Ziyeh, P.; **Cinelli, M.*** *A Framework to Navigate Eco-Labels in the Textile and Clothing Industry.* Sustainability, 2023. 15(19): 14170. https://www.mdpi.com/2071-1050/15/19/14170

2022

JP 25. **Cinelli, M.***; Kadziński, M.; Burgerr, P.; Słowiński, R. *Proper and improper uses of MCDA methods in energy systems analysis.* Decision Support Systems, 2022. 163: 113848. https://doi.org/10.1016/j.dss.2022.113848

JP 24. **Cinelli, M.***; Kadziński, M.; Miebs, G.; Gonzalez, M.; Słowiński, R. *Recommending Multiple Criteria Decision Analysis Methods with A New Taxonomy-based Decision Support System.* European Journal of Operational Research, 2022. 302(2): 633-651. https://doi.org/10.1016/j.ejor.2022.01.011

2021

JP 23. Lindén, D.; **Cinelli, M.***; Spada, M.; Becker, W.; Gasser, P.; Burgherr, P. *A framework based on statistical analysis and stakeholders' preferences to inform weighting in composite indicators.* Environmental Modelling & Software, 2021. 145: 105208. https://doi.org/10.1016/j.envsoft.2021.105208

JP 22. **Cinelli, M.***; Gonzalez, M.; Ford, R.; McKernan, J.; Corrente, S.; Kadziński, M.; Słowiński, R. *Supporting Contaminated Sites Management with Multiple Criteria Decision Analysis: Demonstration of a Regulation-Consistent Approach.* Journal of Cleaner Production, 2021. 316: 128347. https://doi.org/10.1016/j.jclepro.2021.128347

JP 21. Piaggio, D.*; Castaldo, R.; **Cinelli, M.**; Cinelli, S.; Maccaro, A.; Pecchia, L. *A framework for designing medical devices resilient to low-resource settings.* Globalization and Health, 2021. 17: 64. https://doi.org/10.1186/s12992-021-00718-z

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JP 20. Kadziński, M.*; Martyn, K.; **Cinelli, M.**; Słowiński, R.; Corrente, S.; Greco, S. *Preference disaggregation method for value-based multi-decision sorting problems with a real-world application in nanotechnology*. Knowledge-Based Systems, 2021. 218. 106879. https://doi.org/10.1016/j.knosys.2021.106879

JP 19. **Cinelli, M.***; Spada, M.; Zhang, Y.; Kim, W.; Burgherr, P. *MCDA Index Tool. An interactive software to develop indices and rankings*. Environment Systems and Decisions, 2021. 41(1): 82-109. https://doi.org/10.1007/s10669-020-09784-x

JP 18. Gasser, P.*; Lustenberger, P.*; **Cinelli, M.**; Kim, W.; Spada, M.; Burgherr, P.; Hirschberg, S.; Stojadinović, B.; Sun, Y. T. *A review on resilience assessment of energy systems*. Sustainable and Resilient Infrastructure, 2021. 6(5): 273-299. https://doi.org/10.1080/23789689.2019.1610600

2020

JP 17. **Cinelli, M.***; Kadziński, M.; Gonzalez, M.; Słowiński, R. *How to Support the Application of Multiple Criteria Decision Analysis? Let us Start with a Comprehensive Taxonomy*. Omega, 2020. 96: 102261. https://doi.org/10.1016/j.omega. 2020.102261

JP 16. Gasser, P.*; **Cinelli, M.**; Labijak, A.; Spada, M.; Burgherr, P.; Kadziński, M.; Stojadinović., B. *Quantifying electricity supply resilience of countries with robust efficiency analysis*. Energies, 2020. 13(7): 1535. https://doi.org/10.3390/en13071535

JP 15. Gasser, P.*, Suter, J; **Cinelli, M.**; Spada, M.; Burgherr, P.; Hirschberg, S.; Kadziński, M.; Stojadinović., B. *Comprehensive resilience assessment of electricity supply security for 140 countries*. Ecological Indicators, 2020. 110. https://doi.org/10.1016/j.ecolind.2019.105731

JP 14. Kadziński, M.*; Martyn, K.; **Cinelli, M.**; Słowiński, R.; Corrente, S.; Greco, S. *Preference disaggregation for multiple criteria sorting with partial monotonicity constraints: application to exposure management of nanomaterials*. International Journal of Approximate Reasoning, 2020. 117: 60-80. https://doi.org/10.1016/j.ijar.2019.11.007

JP 13. Prado-Lopez, V.*; **Cinelli, M.**; ter Harr, F. S.; Ravikumar, D.; Heijungs, R.; Guinee, J. B.; Seager, T. P. *Sensitivity to weighting in Life Cycle Impact Assessment (LCIA)*. The International Journal of Life Cycle Assessment, 2020. 25: 2393-2406. https://doi.org/10.1007/s11367-019-01718-3

2019

JP 12. **Cinelli, M.***; Spada, M.; Kadziński, M.; Miebs, G.; Burgherr, P. *Advancing hazard assessment of energy accidents in the natural gas sector with rough set theory and decision rules*. Energies, 2019. 12(21): 4178. https://doi.org/10.3390/en12214178

JP 11. Bertola, J. N.*; **Cinelli, M.**; Casset, S.; Corrente, S.; Smith, I. *A multi-criteria decision framework to support measurement-system design for bridge load testing*. Advanced Engineering Informatics, 2019. 39: 186-202. https://doi.org/10.1016/j.aei.2019.01.004

2018

JP 10. Windsor, R.; **Cinelli, M.**; Coles, S. R.* *Comparison of tools for the sustainability assessment of nanomaterials*. Current Opinion in Green and Sustainable Chemistry, 2018. 12: 69-75. https://doi.org/10.1016/j.cogsc.2018.06.010

JP 9. Jasinski, D.*; **Cinelli, M.**; Dias, L.C.; Meredith, J.O.; Kirwan, K. *Assessing Supply Risks for Non-Fossil Mineral Resources via Multi-Criteria Decision Analysis*. Resources Policy, 2018. 58: 150-158. https://doi.org/10.1016/j.resourpol.2018.04.011

JP 8. Kadziński, M.*; **Cinelli, M.**; Ciomek, K; Coles, S. R.; Nadagouda, M. N.; Varma, R. S.; Kirwan, K. *Co-constructive development of a green chemistry-based model for the performance assessment of nanoparticles synthesis*. European Journal of Operational Research, 2018. 264(2): 472-490. https://doi.org/10.1016/j.ejor.2016.10.019

2017

JP 7. **Cinelli, M.***; Coles, S. R.; Nadagouda, M.N.; Błaszczyński, J.; Słowiński, R.; Varma, R.S.; Kirwan, K. *Robustness analysis of a classification model for the synthesis of silver nanoparticles*. Journal of Cleaner Production, 2017. 162: 938-948. https://doi.org/10.1016/j.jclepro.2017.06.113

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JP 6. Cinelli, M.* *The art of supporting decision-making*. Exchanges: The Warwick Research Journal, 2017. 4(2): 298-308. https://exchanges.warwick.ac.uk/article/view/166

2016

JP 5. Cinelli, M.*; Coles, S. R.; Sadik, O.; Karn, B.; Kirwan, K. *A Framework of Criteria for the Sustainability Assessment of Nanoproducts.* Journal of Cleaner Production, 2016. 126: 277-287. https://doi.org/10.1016/j.jclepro.2016.02.118

2015

JP 4. Cinelli, M.*; Coles, S. R.; Nadagouda, M. N.; Błaszczyński, J.; Słowiński, R.; Varma, R.S.; Kirwan, K. *A green chemistry-based classification model for the synthesis of silver nanoparticles.* Green Chemistry, 2015. 17: 2825-2839. https://doi.org/10.1039/C4GC02088J
> ***** *Part of top 10% most downloaded articles published in Green Chemistry in 2015*

2014

JP 3. Cinelli, M.*; Coles, S. R.; Kirwan, K. *Analysis of the Potentials of Multi Criteria Decision Analysis Methods to Conduct Sustainability Assessment.* Ecological Indicators, 2014. 46: 138-148. https://doi.org/10.1016/j.ecolind.2014.06.011
> ***** *Enough citations to be in the top 1% of the academic field of Environment/Ecology, from Essential Science Indicators by Thomson Reuters; part of the most downloaded articles published in Ecological Indicators in the last 90 days*

JP 2. Hristozov, D. R.*; Gottardo, S.; **Cinelli, M.**; Isigonis, P.; Zabeo, A.; Critto, A.; Van Tongeren, M.; Tran, L.; Marcomini, A. *Application of a quantitative weight of evidence approach for ranking and prioritization of occupational exposure scenarios for titanium dioxide and carbon nanomaterials.* Nanotoxicology, 2014. 8(2): 117-131. https://doi.org/10.3109/17435390.2012.760013

2013

JP 1. Cinelli, M.*; Florencio, P.; Hancox, I.; Reddick, Y.; Uzoechi, K. *Approaches to Sustainability Conference, 28th June 2013.* Exchanges: The Warwick Research Journal, 2013. 1(1), 86-90. https://exchanges.warwick.ac.uk/article/view/75

Non peer-reviewed

JP C. Reale, F.; **Cinelli, M.**; Sala, S.* *Towards a research agenda for the use of LCA in the impact assessment of policies*. The International Journal of Life Cycle Assessment, 2017. 22(9): 1477-1481. https://doi.org/10.1007/s11367-017-1320-0

JP B. Cinelli, M.*; Coles, S. R.; Jørgensen, A.; Zamagni, A.; Fernando, F.; Kirwan, K. *Workshop on life cycle sustainability assessment: the state of the art and research needs—November 26, 2012, Copenhagen, Denmark.* The International Journal of Life Cycle Assessment, 2013. 18(7): 1421-1424. https://doi.org/10.1007/s11367-013-0573-5

JP A. Cinelli, M.* *Analysis of Feed-in and Tradable Green Certificates (TGC) support mechanisms for renewable energy in Europe.* Journal of International Development and Cooperation, 2011. 17(3): 45-60. http://ir.lib.hiroshima-u.ac.jp/en/list/HU_journals/AN10482914/17/3/item/32443

Book Chapters *(BC)*

BC 1. He, P.*; Herthogs, P.*; **Cinelli, M.**; Tomarchio, L.; Tunçer, B. *A multi-criteria decision analysis based framework to evaluate public space quality*. In R. Roggema and A. Roggema, eds. *Smart and Sustainable Cities and Buildings* Cham: Springer International Publishing; 2020: 273-285. https://link.springer.com/chapter/10.1007/978-3-030-37635-2_18

Scientific Reports *(SR)*

SR 2. Curcio, B.; De Commarmond, S.; Hess, R.; Minder, T. 2018. *Feasibility of recycling: An appraisal methodology*. In Krütli P., Nef, D., Zumwald, M., Haupt, M., Harlay, J, & Stauffacher M. (Eds.). Waste management in the Seychelles – Pathways for Systemic Change. ETH Zurich, USYS TdLab Transdisciplinary case study 2018, http://www.tdlab.usys.ethz.ch/teaching/tdcs/former/cs2018.html

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> ***** *Supported Bianca Curcio and Ramon Hess in the development and implementation of an MCDA-based methodology for the ranking of products to recycle on the Seychelles*

SR 1. Sala, S.; Cerutti, A. K.; Pant, R. 2018. *Development of a weighting approach for the Environmental Footprint.* Publications Office of the European Union, Luxembourg, ISBN 978-92-79-68042-7, EUR 28562, DOI: 10.2760/945290.
> ***** *Contributed to the assessment of available weighting methods in LCA and the framing of the weighting approach proposed in the report*

Software Package *(SP)*

SP 2. Lindén, D.; **Cinelli, M.**; Spada, M.; Becker, W.; Burgherr, P. 2021. *Composite Indicator Analysis and Optimization (CIAO) Tool, v.2*. Future Resilient Systems (FRS), Swiss Federal Institute of Technology (ETH) Zürich, Singapore-ETH Centre (SEC), http://dx.doi.org/10.13140/RG.2.2.14408.75520
> **A Matlab tool to assess implicit weights in composite indicators and balance their influence*

SP 1. Zhang, Y.; Kim, W.; **Cinelli, M.**; Gasser, P.; Spada, M.; Burgherr, P. 2018. *MCDA Index Tool. An interactive software to develop indices and rankings*. Future Resilient Systems (FRS), Swiss Federal Institute of Technology (ETH) Zürich, Singapore-ETH Centre (SEC), http://dx.doi.org/10.13140/RG.2.2.24321.71529
> ** A web platform to build indices based on multiple combinations of normalization and aggregation functions*

Thesis

- *Advancing sustainable nanotechnology with multiple criteria decision aiding*, PhD Thesis, 2016, WMG Department, The University of Warwick, http://wrap.warwick.ac.uk/86095/1/WRAP_Theses_Cinelli_2016.pdf

Conference paper *(CP)* proceedings (peer-reviewed)

CP 5. Gasser, P.; **Cinelli, M.**; Spada, M.; Burgherr, P.; Stojadinović., B. *Indices under the spotlight: An Approach to Unveil and Manage the Implicit Trade-offs between Indicators*. Pages 3445-3452 in Proceedings of the 29th European Safety and Reliability (ESREL) Conference, 22-26 September 2019, Hannover, Germany. DOI: 10.3850/978-981-11-2724-3_ 0417-cd. ISBN 978-981-11-2724-3.

CP 4. He, P.; Herthogs, P.; **Cinelli, M.**; Tomarchio, L.; Tunçer, B. *A multi-criteria decision analysis based framework to evaluate public space quality*. Pages 286-297 in Proceedings of Smart & Sustainable Built Environments. 6th CIB International Conference. International Council for Research and Innovation in Building and Construction, SASBE 2018, 4-7 December, 2018, Sydney, Australia. https://docs.wixstatic.com/ugd/6e13f1_682d42481a4d4e08b9a046cfade9616a.pdf

CP 3. Burgherr, P.; **Cinelli, M.**; Spada, M.; Błaszczyński, J.; Słowiński, R.; Pannatier, Y. *Risk assessment of worldwide refinery accidents using advanced classification methods: effects of refinery configuration and geographic location on outcome risk levels.* Pages 1681-1688 in Safety and Reliability – Safe Societies in a Changing World. Proceedings of the 28th European Safety and Reliability of Complex Engineered Systems (ESREL) Conference, 17-21 June 2018, Trondheim, Norway. ISBN 978-0-8153-8682-7. https://www.taylorfrancis.com/books/9781351174657

CP 2. Cinelli, M.; Spada, M.; Miebs, G.; Kadziński, M.; Burgherr, P. *Classification models for the risk assessment of energy accidents in the natural gas sector*. Pages 112-120 in Proceedings of the 2nd International workshop on Modelling of Physical, Economic and Social Systems for Resilience Assessment, 14-16 December 2017, Ispra, Italy. Publications Office of the European Union. DOI: 10.2760/556714. http://publications.jrc.ec.europa.eu/repository/handle/JRC108902

CP 1. Cinelli, M.; Coles, S. R.; Kirwan, K. *Use of Multi Criteria Decision Analysis to Support Life Cycle Sustainability Assessment: An Analysis of the Appropriateness of the Available Methods.* Pages 677-680 in Proceedings of the 6th International Conference on Life Cycle Management, 25-28 August, 2013, Gothenburg, Sweden. http://conferences.chalmers.se/index.php/LCM/LCM2013/paper/view/665

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Conference/Seminar oral presentations

Invited (Keynote/Plenary)

1. *MCDA for Sustainability Assessment*, Helmholtz workshop on MCDA for Sustainability Assessment, Karlsruhe (Germany), 18-19 October, 2023

Invited (First author)

18. *GLAM Weighting subtask reporting* (co-author Cecilia Askham), Global Life Cycle Impact Assessment Method (GLAM) Workshop, Online, 21-22 May, 2024

17. *GLAM Weighting subtask reporting* (co-author Cecilia Askham), Global Life Cycle Impact Assessment Method (GLAM) Workshop, Copenhagen (Denmark), 30 May - 1 June, 2023

16. *The MCDA Methods Selection Software (MCDA-MSS): A Radar for Decision Analysts* (co-authors Milosz Kadziński, Peter Burgherr, Michael A. Gonzalez, Roman Słowiński), INFORMS annual meeting, Indianapolis (USA), 16-19 October, 2022

15. *Testing a novel Decision Support System to identify the most suitable MCDA method for energy systems analysis* (co-authors Milosz Kadziński, Peter Burgherr, Grzegorz Miebs, Roman Słowiński), ESREL 2021, Virtual, 19-23 September, 2021

14. *Supporting complex decision-making in multiple criteria-based projects with MCDA-MSS* (co-authors Milosz Kadziński, Peter Burgherr, Roman Słowiński), International Conference on Operations Research 2021, Virtual, 31 August - 3 September, 2021

13. *A New Decision Support System for Recommending Multiple Criteria Decision Analysis (MCDA) Methods* (co-authors Milosz Kadziński, Grzegorz Miebs, Michael A. Gonzalez, Roman Słowiński), INFORMS annual meeting, Virtual, 7-13 November, 2020

12. *Materials, Technologies and Systems Assessment: Multiple Criteria-based Challenges*, Network of Early-Career Sustainable Scientists & Engineers (NESSE) & The Innovative Manufacturing and Future Materials Global Research Priority Conference, University of Warwick, Coventry (UK), 3 March, 2020

11. *A decision support system for Multi-Criteria Decision Analysis (MCDA): The case of resilience assessment for countries' electricity supply*, University of Warwick, Coventry (UK), 26 February, 2019

10. *Comparative resilience assessment of national electricity supply* (co-authors Patrick Gasser, Milosz Kadziński, Matteo Spada, Peter Burgherr, Stefan Hirschberg), Royal Institute of Technology (KTH), Stockholm (Sweden), 22 August, 2018

9. *Rankings comparisons: the case of resilience assessment of countries' electricity supply* (co-authors Patrick Gasser, Milosz Kadziński, Matteo Spada, Peter Burgherr, Stefan Hirschberg), 29th European Conference on Operational Research, Valencia (Spain), 8-11 July, 2018

8. *A multidisciplinary itinerant career*, Institute of Advanced Study Symposium - The Internationalisation of Research, Warwick Business School (WBS) London, the Shard, London (UK), 17 May, 2018
    https://www2.warwick.ac.uk/fac/cross_fac/ias/activities/symposium/2018
    * Part of my focal interest on professional development of early career researchers

7. *Moving Sustainability and Resilience Assessment Forward with Decision Aiding* (invited by Prof. Kim Leng Poh and Operational Research Society of Singapore), Faculty of Engineering, National University of Singapore, Singapore, 29 November, 2017 http://www.frs.ethz.ch/News/frs-news-channel/2017/11/sustainability-and-resilience-assessment-with-mcda.html

6. *A structured decision support framework for the risk assessment of energy technologies* (co-authors Matteo Spada, Milosz Kadziński, Roman Słowiński, Peter Burgherr, Stefan Hirschberg), 21st Conference of the International Federation of Operational Research Societies, Quebec City (Canada), 17-21 July, 2017

5. *Implementing sustainability. (Why and) How?*, Sustainability Economics Workshop, World 50 Labs, New York City (USA), 21-23 March, 2017
    * Part of my focal interest on science communication to industry and policy-makers

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4. *Co-constructive development of a green chemistry-based model for the performance assessment of nanoparticles synthesis* (co-authors Milosz Kadziński, Krisztof Ciomek, Stuart R. Coles, Mallikarjuna N. Nadagouda, Rajender S. Varma, Kerry Kirwan), 28th European Conference on Operational Research (EURO), Poznań (Poland), 3-6 July, 2016

3. *Co-Constructing Sustainable Nanotechnology with Multiple Criteria Decision Aiding*, (invited by Dr. Serenella Sala) Bio-Economy Unit – Directorate D - Sustainable Resources, Joint Research Centre (JRC), European Commission, Ispra (Italy), 2 May, 2016

2. *Why should you invest time and effort on your Professional Development?*, (invited by the Graduate School of the University of Warwick) the Graduate, University of Warwick, Coventry (UK), 16 March, 2016
    https://www2.warwick.ac.uk/services/academicoffice/gsp/community/pglunches/pgr_lunch_2016_03_20_mc_for_graduate_school.pdf
    * Part of my focal interest on professional development of early career researchers

1. *Multi-Criteria Decision Aiding: A Decision Support Approach for Green Chemistry-Oriented Synthesis of Nanomaterials* (co-authors Stuart R. Coles, Mallikarjuna N. Nadagouda, Jerzy Błaszczyński, Roman Słowiński, Rajender S. Varma, Kerry Kirwan), 23rd International Conference on Multiple Criteria Decision Making (MCDM), Hamburg (Germany), 2-7 August, 2015

Self-proposed (First author)

15. *How can Multiple Criteria Decision Analysis support the evaluation of Nature-based Solutions?* (co-authors Lorette Gallois, Elisabeth Hirtz, Jeewanthi Sirisena, Shreya Mozumdar, Marc van den Homberg, Vincent van Haaren, Aklilu Teklesadik, Eric Oyare), 3rd International Conference Natural Hazards and Risks in a Changing World, Amsterdam (NL), 12-13 June, 2024

16. *MCDA & econometrics contribute a new set of weights for life cycle assessment* (co-authors Ayse Subaşı, Cecilia Askham, Erlend Dancke Sandorf, Luis Cândido Dias, Danny Campbell, Elçin Filiz Taş, Norihiro Itsubo, Christine Betty Nagawa, Christine Mugumya Kyarimpa, Mamadou Djerma, Bazoin Sylvain Raoul Bazie), 27th International Conference on Multiple Criteria Decision Making (MCDM), Hammamet (Tunisia), 2-7 June, 2024

14. *Teaching multiple criteria decision analysis at Leiden University College*, 96th Meeting of the European Working Group on Multiple Criteria Decision Aiding (EWG-MCDA), Paris (France), 21-23 September, 2023

13. *How can Multiple Criteria Decision Analysis (MCDA) support the remediation of contaminated sites? Insights from an U.S. EPA case study* (co-authors Michael A. Gonzalez, Robert Ford, John McKernan, Salvatore Corrente, Miłosz Kadziński, Roman Słowiński), SETAC Europe, Virtual, 3-6 May, 2021

12. *Marie Skłodowska-Curie Individual Fellowship: My story,* Crafting Grants and Fellowships Applications seminar, CREATE Tower, Singapore, 12 April, 2018

11. *Resilience assessment of countries' electricity supply according to different aggregation functions* (co-authors Patrick Gasser, Johannes Suter, Milosz Kadziński, Matteo Spada, Peter Burgherr, Stefan Hirschberg), International Conference on Infrastructure Resilience, ETH Zurich, Zurich (Switzerland), 14-16 February, 2018

10. *Classification models for the risk assessment of energy accidents in the natural gas sector* (co-authors Matteo Spada, Grzegorz Miebs, Milosz Kadziński, Peter Burgherr), The 2nd International workshop on Modelling of Physical, Economic and Social Systems for Resilience Assessment, Ispra (Italy), 14-16 December, 2017

9. *State of the art and proposal of an improved weighting approach for LCA* (co-authors Lorenzo Benini, George Gaskell, Francisco Lupiáñez-Villanueva, Serenella Sala, Giuseppe Alessandro Veltri, Rana Pant), Research workshop at Joint Research Centre of the European Commission, Ispra (Italy), 13-14 December, 2016

8. *Multiple Criteria Decision Aiding Moves Sustainable Nanotechnology Forward* (co-authors Stuart R. Coles, Mallikarjuna N. Nadagouda, Jerzy Błaszczyński, Roman Słowiński, Rajender S. Varma, Kerry Kirwan), 82nd European Working Group on Multiple Criteria Decision Aiding (EWG-MCDA), Odense (Denmark), 24-26 September, 2015

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7. *Multi-Criteria Decision Aiding: Supporting Decisions for Green Chemistry-Oriented Synthesis of Nanomaterials* (co-authors Stuart R. Coles, Mallikarjuna N. Nadagouda, Jerzy Błaszczyński, Roman Słowiński, Rajender S. Varma, Kerry Kirwan), 2nd WMG Doctoral Research and Innovation Conference, WMG, University of Warwick, Coventry (UK), 30 June - 1 July, 2015

6. *Moving Sustainable Nanotechnology Forward* (co-authors Stuart R. Coles, Omowunmi Sadik, Barbara Karn, Kerry Kirwan), "Seminars on Nanotechnology", WMG, University of Warwick, Coventry (UK), 09-10 June 2015

5. *Supporting Decision-Making for Nanosafety* (co-authors Stuart R. Coles, Jerzy Błaszczyński, Roman Słowiński, Kerry Kirwan), 3rd Sustainable Nanotechnology Organization Conference, Boston (USA), 2-4 November, 2014

4. *Supporting Decision-Making for Green Synthesis of Nanoparticles* (co-authors Stuart R. Coles, Mallikarjuna N. Nadagouda, Jerzy Błaszczyński, Roman Słowiński, Rajender S. Varma, Kerry Kirwan), 22nd Bio-Environmental Polymer Society Conference, Kansas City (USA), 14-17 October, 2014

3. *Sustainability of Nanocellulose: Proposal for an Integrated Assessment* (co-authors Stuart R. Coles, Kerry Kirwan), 21st Bio-Environmental Polymer Society Conference, Warwick (UK), 18-20 September, 2013

2. *Multi Criteria Decision Analysis: supporting Life Cycle Sustainability Assessment* (co-authors Stuart R. Coles, Kerry Kirwan), 6th International Conference on Life Cycle Management (LCM), Gothenburg (Sweden), 25-28 August 2013

1. *Sustainability assessment of nanocellulose and its applications: a critical review and a proposal of an integrated methodology* (co-authors Stuart R. Coles, Kerry Kirwan), TAPPI International Conference on Nanotechnology for Renewable Materials, Stockholm (Sweden), 24-27 June 2013

Co-authored

13. *How can existing MCDA software support sustainability assessment?* (Laura Mesa Estrada (presenter), other co-authors Martina Hasse, Manuel Baumann), 98th Meeting of the European Working Group on Multiple Criteria Decision Aiding (EWG-MCDA), Catania (Italy), 26-28 September, 2024

12. *GLAM Weighting* (Cecilia Askham (presenter)) parallel event of ORIENTING project at SETAC Europe 33rd annual meeting, Dublin (Ireland), 30 April – 4 May, 2023

11. *Multiple criteria-based assessments of Nature-Based Solutions for flood management: a review* (Lorette Gallois (presenter), other co-author Marc van den Homberg) European Geosciences Union (EGU) General Assembly, Vienna (Austria), 23-28 April, 2023

10. *Designing medical devices (MDs) resilient to low-resource settings (LRSs): a Delphi study and multi-criteria decision analysis (MCDA) approach* (Davide Piaggio (presenter), other co-authors Rossana Castaldo, Sara Cinelli, Alessia Maccaro, Leandro Pecchia) IUPSEM World Congress, Singapore (Singapore), 12-17 June, 2022

9. *Criteria Used to Review Weighting Methods As Part of the UN Environment Life Cycle Initiative's Global Guidance on Environmental Life Cycle Impact Assessment Indicators (GLAM) Project* (Cecilia Askham (presenter), co-authors Chris Koffler, Andrea Amadei, Rosalie Arendt, Till M. Bachmann, Breno Barros, Anders Bjørn, Luis C. Dias, Alexis Laurent, Masaharu Motoshita, Lea Rupcic, Serenella Sala, João Santos, Laura Scherer, Bengt Steen, Ryosuke Yokoi), SETAC Europe 32nd Annual Meeting, Copehagen (Denmark), 15-19 May, 2022

8. *Sustainability Assessment of Potential Areas for Deep Geothermal Energy Systems in Switzerland* (Matteo Spada (presenter), other co-author Peter Burgherr) INFORMS annual meeting, Seattle, OR (USA), 20-23 October, 2019

7. *Indices under the spotlight: An Approach to Unveil and Manage the Implicit Trade-offs between Indicators* (Patrick Gasser (presenter), other co-authors Matteo Spada, Peter Burgherr, Bozidar Stojadinović) 29th European Safety and Reliability (ESREL) Conference, Hannover (Germany), 22-26 September, 2019

6. *Measurement-system-design framework based on multi-objective optimization for bridge load testing* (Numa Bertola (presenter), other co-authors Simon Casset, Salvatore Corrente, Ian Smith) World Congress on Resilience, Reliability and Asset Management, Singapore (Singapore), 28-31 July, 2019

5. *A multi-criteria decision analysis based framework to evaluate public space quality.* (Peijun He (presenter), other co-authors Pieter Herthogs, Ludovica Tomarchio, Bice Tunçer), Smart & Sustainable Built Environments. 6th CIB

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International Conference. International Council for Research and Innovation in Building and Construction, SASBE 2018, Sydney (Australia), 4-7 December, 2018

4. *Risk assessment of worldwide refinery accidents using advanced classification methods: effects of refinery configuration and geographic location on outcome risk levels* (Peter Burgherr (presenter), other co-authors Matteo Spada, Jurek Blaszczynski, Roman Słowiński, Yvan Pannatier), European Safety and Reliability of Complex Engineered Systems, ESREL 2018, Trondheim (Norway), 17-21 June, 2018

3. *Resilience quantification of electricity supply using data envelopment analysis* (Patrick Gasser (presenter), other co-authors Milosz Kadziński, Peter Burgherr, Bozidar Stojadinović), International Conference on Infrastructure Resilience, ETH Zurich, Zurich (Switzerland), 14-16 February, 2018

2. *The role of resilience in a holistic framework for secure energy supply* (Matteo Spada (presenter), other co-authors Peter Burgherr, Stefan Hirschberg), International Conference on Infrastructure Resilience, ETH Zurich, Zurich (Switzerland), 14-16 February, 2018

1. *Sustainability of potential areas for deep geothermal energy systems: A preliminary application to Switzerland* (Matteo Spada (presenter), other co-author Peter Burgherr), INFORMS annual meeting, Houston, TX (USA) 22-25 October, 2017

Conference poster presentations

7. *Weighting factors for LCA - A new set from a global survey* (Cecilia Askham (presenter), other co-authors Ayse Subaşı, Cecilia Askham, Erlend Dancke Sandorf, Luis Cândido Dias, Danny Campbell, Elçin Filiz Taş, Norihiro Itsubo, Christine Betty Nagawa, Christine Mugumya Kyarimpa, Mamadou Djerma, Bazoin Sylvain Raoul Bazie), SETAC Europe 34th annual meeting, Seville (Spain), 5-9 May, 2024

6. *A software for recommending weighting method(s) tailored to LCA studies* (co-authors Grzegorz Miebs, Cecilia Askham, Andrea Amadei, Rosalie Arendt, Till M. Bachmann, Ayse Bayazit Subasi, Luis C. Dias, Olivier Jolliet, Christoph Koffler, Alexis Laurent, Masaharu Motoshita, Hua Qian, Lea Rupic, João Santos, Laura Scherer, Bengt Steen), 11th International Conference on Industrial Ecology (ISIE2023), Leiden (The Netherlands), 01-05 July, 2023

5. *A stochastic method for spatial Multi-Criteria Decision Analysis: Application to Deep Geothermal Energy in Switzerland* (co-authors Matteo Spada, Peter Burgherr), Swiss Competence Centre for Energy Research – Security of Supply (SCCER-SoE) Conference, Lausanne (Switzerland), 3-4 September, 2019

4. *A Preliminary Sustainability Analysis of Potential Areas for Deep Geothermal Energy (DGE) Systems: Application to Switzerland* (co-authors Matteo Spada, Peter Burgherr), Swiss Competence Centre for Energy Research – Security of Supply (SCCER-SoE) Conference, Horw (Switzerland), 13-14 September, 2018

3. *Improving the Sustainability of Nanomaterials Synthesis with Multi Criteria Decision Analysis* (co-authors Stuart R. Coles, Kerry Kirwan), 1st WMG Doctoral Research and Innovation Conference, WMG, University of Warwick, Coventry (UK), 10-11 July, 2014

2. *Development of an Approach for the Sustainability Assessment of Nanomaterials and Nanoproducts* (co-authors Stuart R. Coles, Kerry Kirwan), 2nd Sustainable Nanotechnology Organization Conference, Santa Barbara (USA), 3-5 November, 2013

1. *Development of an Approach for the Sustainability Assessment of Nanomaterials* (co-authors Stuart R. Coles, Kerry Kirwan), 11th MCDA/M Summer School 2013 Helmut-Schmidt-Universität, Hamburg (Germany), 22 July – 2 August, 2013

Collaborations

Ongoing

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- Stanford Center for Biomedical Informatics Research, Stanford University, Palo Alto (USA) [Prof. Mark Musen, Mr. Samson Tu]
- Life Cycle Initiative, United Nations Environment Programme (UNEP) [Prof. Olivier Jolliet, Dr. Cecilia Askham]
- 510 Initiative, Netherlands Red Cross, The Hague, The Netherlands [Dr. Marc van den Homberg]
- Sustainable Heat Division, CE Delft, Delft, The Netherlands [Mr. Benno Schepers]
- Hortus Botanicus, Leiden University, Leiden, The Netherlands [Prof. Paul Kessler]
- Land Remediation and Technology Division, Center for Environmental Solutions and Emergency Response (CESER), U.S. Environmental Protection Agency, Cincinnati (USA) [Dr. Michael Gonzalez]
- Technology Assessment Group, Paul Scherrer Institute (Switzerland) [Dr. Peter Burgherr]
- Applied Biomedical Signal Processing and Intelligent eHealth Lab, Department of Engineering, University of Warwick, Coventry (UK) [Prof. Leandro Pecchia]
- Laboratory of Intelligent Decision Support Systems, Poznań University of Technology (Poland) [Prof. Roman Słowiński, Associate Prof. Miłosz Kadziński]

Completed

- Department of Architecture, Engineering and Built Environment, Polytechnic University of Milan (Italy) [Associate Prof. Valentina Ferretti]
- Bio-Economy Unit Directorate D - Sustainable Resources and the Competence Centre on Composite Indicators of the Joint Research Centre, European Commission, Ispra (Italy) [Dr. Serenella Sala; Dr. William Becker]
- Faculty of Economics, University of Coimbra (Portugal) [Associate Prof. Luis Dias]
- Faculty of Economics, University of Catania (Italy) [Prof. Salvatore Greco, Dr. Salvatore Corrente]
- Ecoinnovazione consultancy (Italy) [Dr Alessandra Zamagni]
- Applied Computing and Mechanics Laboratory, EPFL, Lausanne (Switzerland) [Prof. Ian Smith]
- Big Data Informed Urban Design And Governance group, Future Cities Laboratory, Singapore-ETH Centre (Singapore) [Dr. Pieter Herthogs]
- EarthShiftGlobal consultancy (USA) [Dr. Valentina Prado]

Awards and prizes

Top reviewer for Sentinels of Science   **Sep 2016**
Publons - https://publons.com/home/
- Among 10% of researchers contributing to the peer review in the field of Environmental Science (Oct. 2015 - Sept. 2016) https://publons.com/community/awards/by-field/#environmental-science

Poster prize   **May 2016**
Institute of Advanced Study - University of Warwick, Coventry (UK)
- Annual Symposium Flash talk Competition, Institute of Advanced Study*,* University of Warwick, Coventry, UK, 19-20 May, 2016

Poster prize   **Nov 2013**
Sustainable Nanotechnology Organization (USA)
- Poster competition at the 2nd Sustainable Nanotechnology Conference, Santa Barbara, CA, USA, 2-5 November, 2013

Selected events organization

- Workshop (Organizer and moderator): *"(Serious) Games & Decisions"*, First Crutzen Workshop of the Dutch Climate Research Initiative (KIN) on climate transition in urban areas through the lens of climate justice, Egmond an Zee (Netherlands), 9-11 October, 2023
- Online workshop (Organizer and instructor): *"Multiple Criteria Decision Analysis Methods Selection Software (MCDA-MSS)"*, Part of dissemination work of the Decision Engineering for Sustainability and Resilience Laboratory at Leiden University College, 6 October, 2023. Access the recording of the workshop here

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- Invited session (Organizer and chair): "*MCDA: A highway of opportunities lies ahead*", INFORMS annual meeting, Indianapolis (USA), 16-19 October, 2022

- Invited session (Organizer and chair): "*MCDA for sustainability, resilience and risk assessment*", 31st EURO European Conference on Operational Research, Athens (Greece), 11-14 July, 2021

- Seminar (Organizer and speaker): "*Crafting Grants and Fellowships Applications*", CREATE Tower, Singapore (Singapore), 12 April, 2018

- Forum (Coordinator and chair): "*Transferring Resilience into Best Policies and Best Practices"*, International Conference on Infrastructure Resilience, Zurich (Switzerland), 14-16 February, 2018

- Invited session (Co-chair): "*LCA for policy making support*", SETAC Europe 27th Annual Meeting, Brussels (Belgium), 7-11 May, 2017

- Research workshop (Co-organizer): "*A research agenda on the use of LCA for the impact assessment of EU policies*", Joint Research Centre, European Commission, Ispra (Italy), 13-14 December, 2016

- Invited session (Chair): "*Preference Learning Stream*", 28th EURO European Conference on Operational Research, Poznań (Poland), 3-6 July, 2016

- Conference (Co-chair): "*Third WMG Doctoral Research and Innovation Conference*", WMG, University of Warwick, Coventry (UK), 21 June, 2016

- Invited session (Organizer and chair): "*Use of MCDM/A to support sustainability evaluations*", 23rd International Conference on Multiple Criteria Decision Making, Hamburg (Germany), 2-7 August, 2015

- Seminar (Organizer): "*Seminars on Nanotechnology*", WMG, University of Warwick, Coventry (UK), 09-10 June, 2015

- Conference (Committee member): "*First WMG Doctoral Research and Innovation Conference*", WMG, University of Warwick, Coventry (UK), 10-11 July, 2014

- Research workshop (Co-organizer): "*How do we reduce our chemical dependence on fossil fuels?*", Wolfson Research Exchange, University of Warwick, Coventry (UK), 29 November, 2013

- Research workshop (Co-organizer): "*What is Sustainability?*", Wolfson Research Exchange, University of Warwick, Coventry (UK), 25 March, 2013

Teaching

Multiple interdisciplinary courses   **Oct 2021 – Present**
Leiden University College, The Hague (The Netherlands) https://www.universiteitleiden.nl/en/staffmembers/marco-cinelli#tab-2
- Decision Analysis for Environmental Management
- Qualitative Research Methods
- Research Design in Earth, Energy and Sustainability
- Global Challenges: Sustainability
- Energy and Resource Management

Multiple Criteria Decision Analysis (MCDA) – *My own course on MCDA theory and case studies.*   **Nov 2017 – Present**
Several locations (ETH Zürich; National University of Singapore, Singapore; University of Warwick; Piacenza University)
- The MCDA theory part includes main pillars, being (i) problem background, (ii) problem formulation, (iii) model construction and (iv) decision recommendation
- The application areas of the case studies include green synthesis of nanoparticles, land clean-up, evaluation of raw materials scarcity, resilience assessment of countries from an energy supply perspective and risk assessment of energy accidents

Sustainability and Circularity in Civil Engineering   **Sep 2020 – Sep 2020**
University of Twente, Twente (The Netherlands)
- Guest lecturer: "Introduction to the course"

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Analytics for Strategic Decisions (Bachelor and Master)   **Feb 2019 – Jun 2019 & Mar 2020 – Jun 2020**
London School of Economics and Political Science (LSE), London (UK)
- Guest lecturer: "MCDA applications for sustainability, resilience and risk assessment"
- Marker for the courses' essays

Product Sustainability Assessment   **Set 2014 – Feb 2017**
WMG, University of Warwick, Coventry (UK)
- Lecture as part of WMG's Full-Time MSc course "Lightweight Materials and Structures", Professional and Executive Programme and the Technical Accreditation Scheme for Jaguar Land Rover and Tata Motors (in UK and India)

Multiple Criteria-based Alternatives Assessment   **Set 2014 – Feb 2017**
WMG, University of Warwick, Coventry (UK)
- Organize and run workshops as part of the MEng module on "Design for Sustainability" (Engineering); Marking essays

Ph.D. referee

1. **Multiple Criteria Decision Analysis for energy systems assessment (Maria Rosaria Pappalardo)**   **2020**
   Department of Economics, University of Messina, Messina (Italy)

Supervision

PhD-level

1. **Security of electricity supply in a resilience context (Patrick Gasser)**   **April 2017 – July 2019**
   Future Resilient Systems (FRS), ETH Zürich, Singapore-ETH Centre, Singapore
   o Development of indicators for the quantification of different resilience functions and aggregation through decision support methods

Master-level

4. **Pedigree matrix approach for data quality assessment for LCIs (Floor Bagchus)**   **Jul 2023 – Apr 2024**
   Institute of Environmental Sciences (CML), Leiden University, Leiden (The Netherlands)
   o An approach based on pedigree matrix to assess the uncertainties in life cycle inventories

3. **Exploration of implicit weights in composite indicators (David Linden)**   **Feb 2018 – Oct 2018**
   Paul Scherrer Institute (PSI) & Future Resilient Systems (FRS), ETH Zürich, Singapore-ETH Centre, Singapore & Royal Institute of Technology (KTH), Stockholm (Sweden)
   o Assessment of the implicit weights of the indicators for the construction of resilience indices

2. **Resilience assessment of countries electricity supply (Johannes Suter)**   **Apr 2017 – Jul 2017**
   Paul Scherrer Institute (PSI) & Future Resilient Systems (FRS), ETH Zürich, Singapore-ETH Centre, Singapore
   o Comparison of the resilience performance of a set of countries according to aggregation functions with various degrees of compensation

1. **Stochastic environmental impact assessment of silver nanoparticles synthesis processes** **Oct 2015 – Jun 2016**
   (Ruth Chipperfield)
   WMG, University of Warwick, Coventry (UK)
   o Master project on environmental impact assessment of silver nanoparticles synthesis and comprehensive evaluation based on stochastic multiple criteria decision analysis

Bachelor-level

2. **Capstone theses**
   Leiden University College, The Hague (The Netherlands)

Academic year 2023-2024	Student	Partner
Strategic Application of Multi-Criteria Decision Analysis for the Implementation of Nature-Based Flood Management Solutions in Zambia	Elisabeth Hirtz	510 Red Cross

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	Student	Partner
GIS-MCDA-based Approach to Identify Optimal Locations for Implementing Nature-Based Solutions in Zambia	Elise Darras	510 Red Cross
A Dominance-Based Rough Set Approach to Evaluating Influential Factors of Plastic Hotspot Detection	Kieran Tan	Noria Sustainable Innovations
Multiple Criteria-based Assessment for the Renovation of the Orangery at the Hortus Botanicus in Leiden.	Beatrice Matassino	Hortus Leiden
The Promotion of Period Products: A Thematic Instagram Comparison of Traditional and Alternative Products	Elin Herlaar	
Visual analysis of documentary "2040"	Jan Heitplatz	

Academic year 2022-2023	**Student**	**Partner**
Climate-change communication and place-based education in Sydney and Australia	Ada Nicke	
Investigating installers' and homeowners' perspectives on the barriers and drivers to residential heat pump adoption	Jean Gohin	
Evaluation of Nature-Based Solutions as flood mitigation strategies using multi-criteria decision analysis	Lorette Gallois	510 Red Cross
Social life cycle assessment for agricultural products - A review and a decision support model	Alexandra Enache	
A multiple criteria-based assessement of renovation strategies for a greenhouse of the Hortus Botaniucs in Leiden	Andres Casas Reyes	Hortus Leiden
Selecting sustainable heating technologies for buildings at the neighbourhood level: An MCDA approach	Ian Lin	

Academic year 2021-2022	**Student**	**Partner**
The dependency of the Dutch horticulture on the use of natural gas: A decision-making analysis for a transition to sustainable energy sources	Ilse van der Graaf	CE Delft
Financial markets reaction to the shift of carbon offsets from a certification to a tokenized exchangeable asset/coin.	Mario Edoardo Simmaco	
Fashion labels: sustainability, life cycle and circularity assessment	Paula Ziyeh	
Suitability assessment of medical devices for low resource settings	Martha Brinkmann	
The role of multiple criteria decision analysis (MCDA) in supporting life cycle sustainability assessment (LCSA) of energy systems	Nora Massen	

1. **Stochastic environmental impact assessment of corn stover pre-treatments**   **Apr 2015 – Sep 2015**
   (Ruth Chipperfield)
   WMG, University of Warwick, Coventry (UK)
   o   Use of Stochastic Multi-criteria Acceptability Analysis (SMAA) to support environmental evaluation of four pre-treatment methods of corn stover for bioethanol production

Professional-level

1. **Professional development workshops/seminars**   **Nov 2017 – Aug 2018**

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Future Resilient Systems (FRS), ETH Zürich, Singapore-ETH Centre, Singapore
  o   Coordinate PhD students and researchers on the creation and delivery of a set of workshops/seminars on professional development for PhD students as well as research staff at Singapore-ETH Centre

Professional Activities

- *Reviewer for >20 scientific journals*:   **2014 – Present**
  Scientific reports; Environmental Science & Technology; Journal of Cleaner Production; European Journal of Operational Research; Operational Research; Sustainability; Resources Policy; Climate Policy; Green Chemistry; Ecological Economics; Environment Systems and Decisions; RSC Advances; Journal of Molecular Liquids; Entropy; Journal of Environmental Informatics; Buildings; Journal of Environmental Planning and Management; Decisions in Economics and Finance; Journal of Polymers and the Environment; International Journal of Environmental Analytical Chemistry; Nanoscale; Environment and Planning B: Planning and Design; Land Use Policy; Annals of Operations Research; Lanscale and Urban Planning
  My reviewer's profile on Web of Science - https://www.webofscience.com/wos/author/record/456266

- *Member,* Teaching staff for the accreditation of the BSc/BA Global Challenges at Leiden University College, The Hague (The Netherlands)   **May 2024**

- *Member,* Mock panel for MSc Governance of Sustainability at Institute of Environmental Sciences (CML), Leiden University, Leiden (The Netherlands)   **May 2024**

- *Member,* Mock panel for BSc Science for Sustainable Societies at Institute of Environmental Sciences (CML), Leiden University, Leiden (The Netherlands)   **Jan 2024**

- *Member,* Life Cycle Initiative, United Nations Environment Programme   **Mar 2020 – Present**
  o   *Co-chair,* Weighting subtask, GLAM project   **Apr 2020 – Present**

- *Member,* INFORMS Decision Analysis Society   **Nov 2020 – Present**

- *Member,* International Multiple Criteria Decision Making Society (MCDM)   **Sep 2013 – Present**

- *Member,* INFORMS Multiple Criteria Decision Making Section   **Oct 2019 – Present**
  o   *Board Member*   **Oct 2021 – Present**

- *Member*, EURO Working Group on Multi-Criteria Decision Aiding   **Feb 2015 – Present**

- *Member*, Society of Environmental Toxicology and Chemistry (SETAC)   **Jun 2016 – Present**

- *Member*, Sustainable Nanotechnology Organization   **Sep 2013 – Present**

- *Special Issue Co-Editor,* "Sustainability, Resilience and Risk Assessments Enabled by Multiple Criteria Decision Analysis (MCDA)", Sustainability Journal*:*
  https://www.mdpi.com/journal/sustainability/special_issues/Sus_Resilience_Risk_Assessment **Nov 2020 – Mar 2023**

- *Member*, Network of Early-Career Sustainable Scientists & Engineers   **Sep 2017 – Nov 2022**

- *Member,* ISO/TC 207/SC 5/WG 12 "Life cycle assessment -- Requirements and guidelines" **Sep 2021 – Apr 2022**

- *President*, Student-Staff Liaison Committee, Warwick Manufacturing Group - University of Warwick, Coventry (UK)   **Sep 2013 – Oct 2015**

Training

Teaching preparation   **3, 15 Feb 2022**
Leiden University College, The Hague (The Netherlands)
- How to design a course; Testing and Assessment

Workshop in Decision Making Methods and Techniques   **24 Feb 2021**
University of Portsmouth, Portsmouth (UK)
- Role of multi-criteria decision-making techniques as future and emerging technology

Protégé software and ontology modelling   **27-29 Mar 2019**

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Stanford Center for Biomedical Informatics Research, Stanford University, Palo Alto (USA)
- Development of decision support systems using ontology modelling
- Protégé software training

13th Decision Deck Workshop   **14 Oct 2016**
CentraleSupèlec, Paris (FR)
- Construction of MCDA models with *diviz* platform
- Integration of MCDA and data from Geographical Information Systems (GIS)

Life Cycle Thinking Training   **3 Oct 2016**
European Commission, Joint Research Centre, Ispra (IT)
- Use of life cycle-based methods for development and impact assessment of policies
- Working procedure and implementation of Life Cycle Assessment and related methods

14th JRC Annual Training on Composite Indicators & Scoreboards   **26-29 Sep 2016**
European Commission, Joint Research Centre, Ispra (IT)
- Concepts of composite indicators and scoreboards, similarities and differences, strengths and weaknesses, policy uses
- Guidelines and examples on shaping the theoretical framework, implications of the methodological choices
- Excel-based tool for assessing a composite indicator or scoreboard, with focus on conceptual and statistical coherence

Postgraduate Certificate in Transferable Skills in Science   **Oct 2012 - Oct 2015**
University of Warwick, Coventry (UK)
- 3-year programme with 6 modules: Research skills 1-3; Project Management; Team working; Science Communication

11th MCDA/M Summer School   **22 Jul 2013 – 2 Aug 2013**
Helmut-Schmidt University, Hamburg (Germany)
- State-of-the-art of multiple criteria methods, applications and software
- Analysis and discussion of applications of MCDA to complex and real life evaluation situations

Skills and Interests

- *Languages*: Italian (native), English (C2), German (A1)
- *Software packages*: Office, SPSS (software for statistical data analysis), Gabi (software to perform life cycle (sustainability) assessments), JSMAA & SMAA-LCA (software for Stochastic Multicriteria Acceptability Analysis), *diviz* (platform to support complex decision-making problems), JMAF & jRank (software for Dominance-based Rough Set Approach), ELECTRE & PROMETHEE (software for outranking MCDA methods)
- *Interests*: ski touring; triathlon; festivals organization (logistics & equipment for camps planning); society and ethics books; independent traveling (road trips in USA, Japan, India, Europe, Australia)
- *Leisure achievements*: Gran San Bernardo bike climb (Italy), 31 August, 2020; Gran Sasso bike climb (Italy), 10 August, 2020; Glacier of Mandrone climb (Italy), 21-22 August, 2020; Cincinnati hungry turkey half marathon (USA), 24 November, 2018; TrioKuota Peschiera Olympic triathlon (Italy), 15 September, 2018; Four Passes bike climb, Val Gardena, Dolomites (Italy), 29 August, 2018; Iseo Franciacorta Olympic triathlon (Italy), 1 July, 2018; Tour de Bintan Gran Fondo (Indonesia), 24 March, 2018; Doi Inthanon bike climb (Thailand), 26 January, 2018; Singapore half-Marathon (Singapore), 3 December, 2017; Singapore Duathlon, 12 November, 2017; Duathlon Melaka (Malaysia), 5 November, 2017; Singapore Aquathlon (Singapore), 22 October, 2017; Bike day "Stelvio Pass" (Italy), 29 August, 2015; Charity swim for UK British Heart Foundation, Bournemouth Pier to Pier (UK), 14 July, 2013.

References

Title	Person	Department/Organization

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Full Professor	Roman Slowinski @: roman.slowinski@cs.put.poznan.pl http://idss.cs.put.poznan.pl/site/rslowinski.html	Laboratory of Intelligent Decision Support Systems Institute of Computing Science Poznań University of Technology Poznan, Poland
Group leader	Peter Burgherr @: peter.burgherr@psi.ch https://www.psi.ch/en/ta/people/peter-burgherr	Technology Assessment Group Laboratory for Energy Systems Analysis Paul Scherrer Institute Villigen PSI, Switzerland
Full Professor	Mark Musen @: musen@stanford.edu https://profiles.stanford.edu/mark-musen	Stanford Center for Biomedical Informatics Research School of Medicine Stanford University Palo Alto, USA
Full Professor	Leandro Pecchia @: L.Pecchia@warwick.ac.uk https://warwick.ac.uk/fac/sci/eng/people/leandro_pecchia/	Applied Biomedical Signal Processing and Intelligent eHealth Lab School of Engineering University of Warwick Coventry, UK
Full Professor	Kerry Kirwan @: Kerry.Kirwan@warwick.ac.uk https://warwick.ac.uk/fac/sci/wmg/people/profile/?wmgid=138	Sustainable Materials and Manufacturing Group WMG Department University of Warwick Coventry, UK
Full Professor	Luis Dias @: lmcdias@fe.uc.pt https://www.uc.pt/en/feuc/ldias	School of Economics University of Coimbra Coimbra, Portugal
Branch Chief	Michael Gonzalez @: Gonzalez.Michael@epa.gov https://www.linkedin.com/in/michael-gonzalez-5398276/	Environmental Decision Analytics Branch Land Remediation and Technology Division Center for Environmental Solutions and Emergency Response U.S. Environmental Protection Agency Cincinnati, USA