



List of publications (at June, 2022) of:

**Daniela Molinari**

Associate professor

Department of Civil and Environmental Engineering, Politecnico di Milano

Piazza L. Da Vinci, 32; 20133 Milano (Italy)

Tel.: +39-02-23996206; Email: [daniela.molinari@polimi.it](mailto:daniela.molinari@polimi.it)

## Articles in Journals

J1) Tabor G.R., Molinari D., Juleff G., Computational simulation of air flows through a Sri Lanka wind-driven furnace, *Journal of Archaeological Science*, 32(5), 753–766, 2005

J2) Molinari D. Analisi di rischio e incertezza: l'uso dei metodi Monte Carlo per i rischi naturali. *Ingegneria Sismica*, 2, 36-44, 2007

J3) Molinari D., Handmer J., A behavioural model for quantifying flood warning effectiveness, *Journal of flood risk management*, 4(1), 23–32, 2011

J4) Menoni S., Molinari D., Parker D., Ballio F., Tapsell S., Assessing multifaceted vulnerability and resilience in order to design risk-mitigation strategies, *Natural Hazards*, 64(3), 2057-2082, 2012

J5) Molinari D., Ballio F., Menoni S., Modelling the benefits of flood emergency management measures in reducing damages: a case study on Sondrio, Italy, *Natural Hazards and Earth Systems Science*, 13, 1913-1927, 2013

J6) Molinari D., Menoni S., Aronica G.T., Ballio F., Berni N., Pandolfo C., Stelluti M., Minucci G., Ex-post damage assessment: an Italian experience, *Natural Hazards and Earth Systems Science*, 14, 901-916, 2014

J7) Molinari D., Ballio F., Handmer J., Menoni S., On the modeling of significance for flood damage assessment, *International Journal of Disaster Risk Reduction*, 10, part A, 381-391, 2014

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J9) Molinari D., Minucci G., Mendoza M.T., Simonelli T. Implementing the European “Floods Directive”: the Case of the Po River Basin, *Water Resources Management*, 30(5), 1739-1756, 2016

J10) Menoni S., Molinari D., Ballio F., Minucci G., Atun F., Berni N., Pandolfo C. Flood damage: a model for consistent, complete and multi-purpose scenarios, *Nat. Hazards Earth Syst. Sci.* 16, 2783-2797, 2016

J11) Dottori F., Figueiredo R., Martina M.L.V., Molinari D., Scorzini A. (N.B. authors in alphabetical order) INSYDE: a synthetic, probabilistic flood damage model based on explicit cost analysis, *Nat. Hazards Earth Syst. Sci.*, 16, 2577-2591, doi:10.5194/nhess-16-2577-2016, 2016.

J12) Kreibich H., Di Baldassarre G., Vorogushyn S., Aerts J.C.J.H., Apel H, Aronica G.T., Arnbjerg-Nielsen K, Bouwer L.M., Bubeck P., Caloiero T., Chinh D.T., Cortès M., Gain A.K., Giampá V, Kuhlicke C., Kundzewicz Z.W., Llasat M.C., Mård J., Matczak P., Mazzoleni M., Molinari D., Dung N.V., Petrucci O., Schröter K., Slager K., Thielen A.H., Ward P.J., Merz B. Adaptation to flood risk – results of international paired flood event studies, *Earth's Future*, doi: 10.1002/2017EF000606, 2017

- J13) Molinari D., Scorzini A., On the influence of input data quality to flood damage estimation: The Performance of the INSYDE Model, *Water*, 9(9), 688; doi:10.3390/w9090688, 2017
- J14) Di Baldassarre G., Kreibich H., Vorogushyn S., Aerts J., Arnbjerg-Nielsen K., Barendrecht M., Bates P., Borga M., Botzen W., Bubeck P., De Marchi B., Llasat C., Mazzoleni M., Molinari D., Mondino E., Mård J., Petrucci O., Scolobig A., Viglione A., Ward P.J., Hess Opinions: An interdisciplinary research agenda to explore the unintended consequences of structural flood protection, *Hydrol. Earth Syst. Sci.*, 22, 5629–5637, <https://doi.org/10.5194/hess-22-5629-2018>, 2018
- J15) Molinari D., De Bruijn K., Castillo-Rodríguez J.T., Aronica G.T., Bouwer L.M., Validation of flood risk models: Current practice and possible improvements, *International Journal of Disaster Risk Reduction*, 33, 441-44, <https://doi.org/10.1016/j.ijdr.2018.10.022>, 2019, (on line first 2018)
- J16) Scorzini A.R., Radice A., Molinari D., A New Tool to Estimate Inundation Depths by Spatial Interpolation (RAPIDE): Design, Application and Impact on Quantitative Assessment of Flood Damage, *Water* 10, doi:10.3390/w10121805, 2018
- J17) Molinari D., Scorzini A. R., Gallazzi, A., Ballio, F., AGRIDE-c, a conceptual model for the estimation of flood damage to crops: development and implementation, *Nat. Hazards Earth Syst. Sci.*, 19, 2565–2582, <https://doi.org/10.5194/nhess-19-2565-2019>, 2019
- J18) Gaviglio A., Filippetti R., Molinari D., Marescotti M.E., Demartini E., Evaluating the flood damage on dairy farms: a methodological proposal, *Aestimum*, 75, 25-47, 2019
- J19) Minucci G., Molinari D., Gemini G., Pezzoli S., Enhancing flood risk maps by a participatory and collaborative design process, *International Journal of Disaster Risk Reduction* 50, <https://doi.org/10.1016/j.ijdr.2020.101747>, 2020
- J20) Sairam N., Schröter K., Carisi F., Wagenaar D., Domeneghetti A., Molinari D., Brill F., Priest S., Viavattene C., Merz B., Kreibich H., Bayesian Data-Driven Approach Enhances Synthetic Flood Loss Models, *Environmental Modelling and Software* 132, <https://doi.org/10.1016/j.envsoft.2020.104798>, 2020
- J21) Galliani M., Molinari D., Ballio F., Brief communication: simple-INSYDE, development of a new tool for flood damage evaluation from an existing synthetic model, *Nat. Hazards Earth Syst. Sci.*, 20, 2937–2941, <https://doi.org/10.5194/nhess-20-2937-2020>, 2020
- J22) Molinari D., Scorzini A. R., Arrighi C., Carisi F., Castelli F., Domeneghetti A., Gallazzi A., Galliani M., Grelot F., Kellermann P., Kreibich H., Mohor G. S., Mosimann M., Natho S., Richert C., Schroeter K., Thieken A. H., Zischg A. P., Ballio F., Are flood damage models converging to reality? Lessons learnt from a blind test, *Nat. Hazards Earth Syst. Sci.*, 20, 2997–3017, <https://doi.org/10.5194/nhess-20-2997-2020>, 2020
- J23) Radice A., Ballio F., Longoni L., Menoni S., Molinari D., Papini M., Discussion of “Recommendations for teaching a successful design-based course: hydraulic structure design”, by B. P. Tullis and S. L. Barfuss, *Journal of Hydraulic Engineering*, 147 (3), [https://doi.org/10.1061/\(ASCE\)HY.1943-7900.0001863](https://doi.org/10.1061/(ASCE)HY.1943-7900.0001863), 2021
- J24) Pogliani A., Bertulesi M., Bignami D.F., Boschini I., Del Vecchio M., Menduni G., Molinari D., Zambrini F., A Zero-Order Flood Damage Model for Regional-Scale Quick Assessments, *Water*, 13(9), 1292, <https://doi.org/10.3390/w13091292>, 2021
- J25) Molinari D., Dazzi S., Gattai E., Minucci G., Pesaro G., Radice A., Vacondio R., Cost–benefit analysis of food mitigation measures: a case study employing high-performance hydraulic and damage modelling, *Natural Hazards*, on line first: <https://doi.org/10.1007/s11069-021-04814-6>, 2021

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J27) Lazzarin T., Viero D.P., Molinari D., Ballio F., Defina A., Flood damage functions based on a single physics- and data-based impact parameter that jointly accounts for water depth and velocity. *Journal of Hydrology*, 607, <https://doi.org/10.1016/j.jhydrol.2022.127485>, 2022

J28) Gain A.K., Bühler Y., Haegeli P., Molinari D., Parise M., Peres D. J., Pinto J.G., Schröter K., Trigo R.M., Carmen Llasat M., Kreibich H.: Brief Communication: Key papers of 20 years in Natural Hazards and Earth System Sciences, *Nat. Hazards Earth Syst. Sci.*, 22, 985–993, <https://doi.org/10.5194/nhess-22-985-2022>, 2022.

J29) Scorzini A.R., Dewals B., Rodriguez Castro D., Archambeau P., Molinari D.: INSYDE-BE: Adaptation of the INSYDE model to the Walloon Region (Belgium), *Nat. Hazards Earth Syst. Sci.*, 22, 1743–1761, <https://doi.org/10.5194/nhess-22-1743-2022>, 2022.

J30) Simonelli T., Zoppi L., Molinari D., Ballio, F.: Invited perspectives: When research meets practice: challenges, opportunities, and suggestions from the implementation of the Floods Directive in the largest Italian river basin, *Nat. Hazards Earth Syst. Sci.*, 22, 1819–1823, <https://doi.org/10.5194/nhess-22-1819-2022>, 2022.

## Books

B1) Molinari D., Ballio F., Menoni S., *Flood Early Warning Systems: knowledge and tools for their critical assessment*, WIT Press, 2013

## Contributions in books

b1) Molinari D., Cozzi S. Il recepimento in Lombardia delle direttive comunitarie sui rischi, In: M.C. Treu (ed) *Città, Salute, Sicurezza: Strumenti di governo e casi studio*, Maggioli editore, 2009

b2) Delmonaco G., Atun F., Ceudech A., Deemening H., De Roo A., Lumbroso D., Galderisi A., Kallache M., Kropp J.P., Kundak S., Molinari D., Tweed F., Wade S., Walker G., Dandoulaki M., Barredo J. Europe at risk (following EU funded research on hazards and risks), In: Menoni S., Margottini C. (eds.): *Inside Risk: a strategy for sustainable risk mitigation*, Springer, 2011

b3) Esteban J.F., Izquierdo B., Lopez J., Molinari D., Menoni S., De Roo A., Deeming H., Walker G., Eftichidis G. Current mitigation practices in the EU, In: Menoni S., Margottini C. (eds.): *Inside Risk: a strategy for sustainable risk mitigation*, Springer, 2011

b4) Molinari D., Ballio F., Menoni S., Ottomano G. Le curve di danno quale strumento a supporto della Direttiva Alluvioni: criticità del contesto Italiano, In: Bignami D., Alippi C. (eds) *MIARIA (Monitoraggio Idrogeologico Adattativo a supporto del Piano di Rischio Integrato Alpino) - Tecnologia e conoscenza al servizio della sicurezza. vol. II*, Missaglia - LC: Bellavite Editore, 2012

b5) Molinari D., Ballio F., Berni N., Pandolfo C. Towards more effective Early Warning Systems: the Italian Experience. Input Paper prepared for: United Nations Office for Disaster Risk Reduction – UNISDR Making Development Sustainable: The Future of Disaster Risk Management. *Global Assessment Report on Disaster Risk Reduction*, Geneva, Switzerland, 2015, ISBN 978-92-1-132042-8, <http://www.preventionweb.net/english/hyogo/gar/2015/en/home/documents.html>

b6) Berni N., Molinari D., Ballio F., Minucci G., Arias C. Best practice of data collection at the local scale: the RISPOSTA procedure, In: Molinari D., Ballio F. Menoni S. (eds), *Flood Damage Survey and Assessment: New Insights from Research and Practice*, AGU-Wiley, 2017

b7) Menoni S., Atun F., Molinari D., Minucci G., Berni N, Defining complete post flood scenarios to support risk mitigation strategies, In: Molinari D., Ballio F. Menoni S. (eds), Flood Damage Survey and Assessment: New Insights from Research and Practice, AGU-Wiley, 2017

b8) Molinari D., Menoni S., Ballio F. Conclusions, In: Molinari D., Ballio F. Menoni S. (eds), Flood Damage Survey and Assessment: New Insights from Research and Practice, AGU-Wiley, 2017

b9) Molinari, D., Tsionis, G., Athanasopoulou, A., Bournas, D., Ciurean, R., De Gregorio, D., Leone, M., Rossetto, T., Sousa, M.L., Zuccaro, G., 'Residential sector', in: Casajus Valles, A., Marin Ferrer, M., Poljanšek, K., Clark, I. (eds.), Science for Disaster Risk Management 2020: acting today, protecting tomorrow, EUR 30183 EN, Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-18182-8, doi:10.2760/571085, JRC114026.

b10) Toreti, A., Bassu, S., Perez Blanco, D., Capitanio, F., Ramos Ribeiro, R.R., Molinari, D., Webber, H., 'Agriculture', in: Casajus Valles, A., Marin Ferrer, M., Poljanšek, K., Clark, I. (eds.), Science for Disaster Risk Management 2020: acting today, protecting tomorrow, EUR 30183 EN, Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-18182-8, doi:10.2760/571085, JRC114026.

### Conference papers

P1) Molinari D., Ballio F., Menoni S., Flood forecast verification in EWS, Atti del XXXII Convegno nazionale di idraulica e costruzioni idrauliche, 14-17 settembre, 2010, Palermo

P2) Molinari D., Ballio F., Menoni S., Flood forecast verification to support emergency management, Proceeding of the 34th IAHR World Congress, 26 Giugno-1 Luglio 2011, Brisbane, Australia

P3) Molinari D., Ballio F., Menoni S., Flood emergency management: the value of potential and actual damage estimation. In: Proverbs D., Mambretti S., Brebbia C., De Wrachien D. (eds) Flood Recovery Innovation and Response III, WIT Press, 2012

P4) Molinari D., Aronica G.T., Ballio F., Berni N., Pandolfo C., Le curve di danno quale strumento a supporto della direttiva alluvioni: criticità dei dati italiani, Atti del XXXIII Convegno nazionale di idraulica e costruzioni idrauliche, 10-15 settembre, 2012 , Brescia

P5) Molinari D., Ballio F., Berni N., Pandolfo C., Implementing the Floods Directive: the case of the Umbria Region, In: Klijn F., Schreckendiek T. (eds) Comprehensive Flood Risk Management, Taylor & Francis Group, London, 2013

P6) Molinari D., Ballio F., Menoni S., Legnani L., Implementing the Floods Directive: a procedure for flood risk analysis and mapping, Proceedings of 35th IAHR World Congress, 2013 Tsinghua University Press, Beijing, China

P7) Legnani L., Molinari D., Ballio F., Menoni S., La procedura Flood-IMPAT per la valutazione e mappatura del rischio alluvionale, Atti della XIII giornata mondiale dell'acqua: calamità idrogeologiche - aspetti economici, 22 marzo 2013, Accademia Nazionale dei Lincei, Roma

P8) Molinari D., Mazuran M., Arias C., Minucci G., Atun F., Ardagna D., Implementing tools to meet the Floods Directive requirements: a "procedure" to collect, store and manage damage data in the aftermath of flood events, In: Proverbs D., Brebbia C. A. (eds) Flood Recovery Innovation and Response IV, WIT Press, 2014

P9) Ballio F., Molinari D., Minucci G., Mendoza M.T., Atun F., Menoni S., Simonelli T., On the Flood-IMPAT procedure for flood risk analysis and mapping, Proceedings of River Flow 2016, St. Louis, USA, 12-14 luglio 2016- ISBN:978-1-138-02913-2

P10) Minucci G., Mendoza M.T., Atun F., Ballio F., Molinari D., Simonelli T. Analysis of post-event damage data for supporting risk-modelling process, Proceedings of River Flow 2016, St. Louis, USA, 12-14 luglio 2016- ISBN:978-1-138-02913-2

P11) Minucci G., Mendoza M.T., Molinari D., Atun F., Ballio F., Menoni S, Applying the Flood-IMPAT procedure for assessing and mapping flood risk in the Valle D'Aosta region, Atti del XXXV Convegno nazionale di idraulica e costruzioni idrauliche, 14-16 settembre, 2016 , Bologna

P12) Molinari D., Prades R., Garcia-Fernandez M., Dolan M., Menoni S., Marcellini D., Flood damage data analysis: towards an improvement of data quality and usability, Proceedings of FLOODrisk 2016 - 3rd European Conference on Flood Risk Management, 18-20 ottobre 2016, Lyon, France, ISBN: 978-2-7598-9005-7

P13) Minucci G., Garcia-Fernandez M., Menoni S., Molinari D., Jimenez M.J., Mendoza M.T., Ballio F., Berni N., Cedazo Tabernero C. , Mata Francès R., Comparing post-event and pre-event damage assessment: Information gaps and lessons learnt, Proceedings of FLOODrisk 2016 - 3rd European Conference on Flood Risk Management, 18-20 ottobre 2016, Lyon, France, ISBN: 978-2-7598-9005-7

P14) Dolan M., Walliman N., Molinari D., Menoni S. , Ogden R , Amouzad S., Ballio F., Post-flood damage data: requirements for disaster forensic investigation, Proceedings of FLOODrisk 2016 - 3rd European Conference on Flood Risk Management, 18-20 ottobre 2016, Lyon, France, ISBN: 978-2-7598-9005-7

P15) Radice A., Bettiga A., Figueiredo R. and Molinari D., On urban inundation and damage modelling, European Water, 57, 11-17, 2017, Proceedings of the 10th World Congress of EWRA 'Panta Rhei', 5-9 luglio 2017, Athens, Greece

P16) Galliani M., A.R. Scorzini, Molinari D., Minucci G., On flood damage models validation and uncertainty assessment: the case of the 2002 flood in Lodi (Northern Italy), Proceeding of the 5Th IAHR Europe Congress, Trento, 12-14 giugno, 2018

P17) Molinari D., Radice A., Agosti A., Crippa J., Scorzini A. R., Dazzi S., Bertuzzi F., Vacondio R. Modellazione dell'evento alluvionale che ha interessato la città di Lodi nel novembre 2002., Atti del XXXVI Convegno di Idraulica e Costruzioni Idrauliche, Ancona, 12-14 settembre, 2018

P18) Molinari D., Minucci G., Scorzini A.R., Galliani M., Ballio F., La diffusione della conoscenza sul rischio alluvionale nel progetto Flood-IMPAT+, Proceeding of the XXXVI Convegno di Idraulica e Costruzioni Idrauliche, Ancona, 12-14 settembre, 2018

P19) Minucci G., Molinari D., Gemini G., Pezzoli S., Galliani M., Gallazzi A., Co-mapping lab: un'esperienza di costruzione collaborativa delle mappe di rischio alluvionale. Proceeding of the XXII Conferenza Nazionale SIU - Società Italiana degli Urbanisti, Bari-Matera, 5-7 giugno 2019 (premiato come miglior paper)

P20) Bombelli I., Molinari D., Asaridis P., Ballio F., The "Flood Damage Model" repository, Proceeding of the 4th European Conference on Flood Risk Management, 22-24 June 2021 - Virtual Conference

P21) Gallazzi A., Molinari D., Ballio F., Scorzini A.R., Development of a flood damage model for urban drainage networks, Proceeding of the 4th European Conference on Flood Risk Management, 22-24 June 2021 - Virtual Conference