

Marco Bittelli, Associate Professor, Department of Agricultural and Food Sciences, University of Bologna, Italy

PROFESSIONAL EXPERIENCE

2015- Associate Professor, University of Bologna

2011-2018 Associate in Research, Institute of Applied Physics, National Research Council, Florence.

2006-2015 Researcher, Department of Agricultural Sciences, University of Bologna.

2009-2012 Adjunct Faculty, Washington State University, Pullman, WA, USA.

2001-2002 Visiting scientist, University of Heidelberg, Germany.

EDUCATION

2001-2002- Post-doctoral scientist, Washington State University, Pullman, WA, USA.

1998-2001 Ph.D. in Soil Physics, Washington State University, Pullman, WA, USA.

2000-2001 Visiting Scientist, Institute of Environmental Physics, University of Heidelberg, Germany.

1996-1998 Master of Science in Soil Science, Washington State University, Pullman, WA, USA.

1989-1994 Bachelor of Science in Agricultural Sciences, University of Bologna, Italy.

RESEARCH

-Applications of Ground Penetrating Radar for water management in agriculture

-Statistical methods for estimation of soil water content.

-Dielectric Characterization of the Antarctica Polar Cap by Perforations at Dome-C

-Dielectric spectroscopy of porous media

-Computational heat and mass transfer

-Water management and irrigation

-Modelling agro-environmental systems

-Levee stability and monitoring

-Chaotic and complex environmental systems

-Wind patterns and distribution for wind power

-Shallow landslides

-Hydrological modelling

-Heat dissipation of underground electrical power cables

FUNDED RESEARCH PROJECTS

2021-2026 Dielectric Characterization of the Polar Cap, by perforations at Dome-C (Italian National Research Project in Antarctica-PRNA). (Project Role and responsibility: partner).

2019-2021. Prediction of soil hydro-agricultural properties using Ground Penetrating Radar for improving Agricultural practices (Scheme for Promotion of Academic and Research Collaboration, India). Collaboration between Indian Institute of Science, Bangalore, India and University of Bologna. (Project Role and responsibility: International PI).

2017-2022. Dielectric Characterization of the Polar Cap, by perforations at Dome-C (Italian National Research Project in Antarctica-PRNA). (Project Role and responsibility: partner).

2016-2019. Monitoraggio intelligente per infrastrutture sicure (INFRASAFE). POR-FESR, European Regional Development Fund, 2014-2020. (Project Role and responsibility: partner).

2016-2020. Dielectric spectroscopy of soils (SOILSPECTRA). Institute of Applied Physics (IFAC), National Research Council, Italy. (Project Role and responsibility: coordinator).

2012-2015. Measurement of soil salinity: comparison of methods. Financing company: Decagon Devices Inc., Pullman, WA, USA. (Project Role and responsibility: international coordinator).

2011-2014. An intelligent system to detect forest fires. European Commission. EUROSTAR Projects, 5717 EFIRE EUROSTARS. (Project Role and responsibility: international coordinator)

2008-2013. Agrosceari: Scenari di Adattamento dell'agricoltura Italiana ai cambiamenti climatici. (Mipaaf, Decreto Ministeriale n. 325/7303/2007 del 28 dicembre 2007). (Project Role and responsibility: partner)

2007-2010. Case Studies on Research Planning (ARCHAIA): Characterisation, Conservation and Management of Archaeological Sites. <http://www.archaia.unibo.it/> European Commission. (Project Role and responsibility: partner)

2005-2008. Nuove Metodologie relative a progetti integrati di parchi archeologici dell'area mediterranea. Elaborazione, sperimentazione, verifica di tecnologie avanzate e trasferibilita' dei risultati nella valorizzazione di aree a rilevante interesse culturale, ambientale e artistico. Selezione di casi studio in Siria settentrionale e Turchia Orientale. Ministry of Education, Universities and Research, (Rome,Italy). FIRB. (Project Role and responsibility: partner).

2003-2006. Shallow Landslides Investigation Device (SLID): a tool to assess land susceptibility to shallow landslides. European Commission. LIFE environment. (Project Role and responsibility: partner).

2003-2006. Water Quality Protection, Measuring Hydraulic Conductivity and Solute Diffusion Coefficients to Assess Water Flow and Pollutants Transport in Soils and Rocks". Ministry of Education, Universities and Research, (Rome,Italy). Grant "Rientro dei Cervelli" (Brain Drain Project)(Project Role and responsibility: partner).

1999-2001. A low cost scanning thermodielectric analyzer to obtain freezing characteristics of foods, soils, and other materials. Financing agency: Washington Technology Center, Seattle, WA, USA. (Project Role and responsibility: leader).

1997-2000. Effect of foliar application of Chitosan on water use in field crops. Financing agency: Washington Technology Center, Seattle, WA, USA. (Project Role and responsibility: leader).

1995-1996. European Community Scholarship: Linking Geographical Information Systems (ArcView) and Computer Models (CropSyst), for the assessment of water and solutes transport on large scale. (Project Role and responsibility: leader).

TEACHING

Several courses have been taught over the years, at the undergraduate and graduate level:

- Soil and Environmental Physics (both in Italian and English)
- Data Analysis with R (In Italian)
- General Agronomy (In Italian)
- Hydrology (In English)
- Non-Linear Time Series Analysis (In English)
- Philosophy of Science and Scientific Methods (In English)
- He has been mentoring many undergraduate, master and PhD students.

HONOURS AND AWARDS

- 2019. Invited speaker for the Campbell lecture <https://css.wsu.edu/seminars/campbell/>
- 2003. Nominated member of the Institute of Advanced Study, University of Bologna (<http://www.isa.unibo.it/en>)
- 2003. Recipient of the grant Brain Drain Project (Rientro dei cervelli). Ministero dell'Università e della Ricerca, MIUR, Roma.
- 1999. Editor Citation for excellent in manuscript review. Soil Science Society of America.

SEMINARS, INVITED LECTURES AND COURSES

- 2021. Webinar: Workshop on Statistical methods for analysis of soil data. 13th to 16th September 2021. SPARC (Scheme for Promotion of Academic and Research Collaboration), Grant number 375, Department of Civil Engineering, Indian Institute of Science, Bangaluru, India and Department of Civil, Chemical, Environmental and Materials Engineering, University of Bologna, Italy.
- 2021. Webinar: Workshop on Ground Penetrating Radar applications in soil moisture determination, field monitoring and stability of river embankments. 23rd and 24th March 2021. SPARC (Scheme for Promotion of Academic and Research Collaboration), Grant number 375, Department of Civil Engineering, Indian Institute of Science, Bangaluru, India and Department of Civil, Chemical, Environmental and Materials Engineering, University of Bologna, Italy.
- 2020. Utilizzo del Geo-Radar per la determinazione di cavita' in strutture arginali. Corso tenuto nell'ambito del convegno: Gestione e monitoraggio degli argini e delle strutture di contenimento fluviale. Commissione di Idraulica dell'Ordine degli Ingegneri di Firenze.
- 2019. Short Course: TDR and dielectric methods. Indian Institute of Science, Bangaluru, India
- 2018. Short Course: Soil Physics with Python. Indian Institute of Science, Bangaluru, India
- 2018. Short Course: Non Linear Time Series Analysis. Indian Institute of Science, Bangaluru, India.
- 2018. Short Course: Soil Physics with Python. University of Suratthani Rajabhat, Suratthani, Thailand.
- 2018. Short Course: Soil Physics with Python. University of Zagreb, Zagreb, Croatia.
- 2017. Invited Lectures: Soil Physics with Python. University of Zagreb, Zagreb, Croatia.

2016. Invited Lectures: Soil Physics with Python. University of Zagreb, Zagreb, Croatia.

2015. Lecture: Computational Heat and Mass Transfer in Unsaturated Soils. Cracow University of Technology, Cracow, Poland.

2009. Lecture: Research at the Soil and Environmental Physics group at the University of Bologna, Italy, an overview. University of Florida, Gainesville, FL, USA. August, 2009.

2009. L'utilizzo di metodi a pressione di vapore per la determinazione della curva di ritenzione idrica. Nell'ambito del corso di aggiornamento tecnico-scientifico in fisica e idrologia del suolo. Associazione Italiana Pedologi, CNR-ISAFOM, Napoli, 4-5 Giugno, 2009.

2009. Invited Lecture: Microwave Remote Sensing Seminar. Measuring soil water content: methods, limitations and future challenges. CNR-IFAC, Florence, May 20, 2009.

2009. Graduate Seminar: A 3-D Model of Surface and Subsurface Hydrology. Department of Biological Systems Engineering, Washington State University, USA. January, 2009.

2008. Lecture: The physics of Ground Penetrating Radar. Seeing beneath the soil - not intrusive investigation methodologies and diagnostics for archaeology. International Summer School, Ravenna-Marzabotto, 5th -15th June 2008. PDF

2006. Invited Lecture: Water balance at the field and watershed scale. WUEMED: Improving water use efficiency in Mediterranean Agriculture, 5th -10th June 2006. <http://www.distagenomics.unibo.it/wuemed/index.html>

2006. Invited Lecture: Innovative methods for measuring soil water content. WUEMED: Improving water use efficiency in Mediterranean Agriculture, 5th -10th June 2006. <http://www.distagenomics.unibo.it/wuemed/index.html>

EDITORIAL ROLES

2019-2024- Vadose Zone Journal (Soil Science Society of America), Associate Editor

2021-2023- Measurement Science and Technology, Guest Editor

2020-2024- Geofluids. Associate Editor

MEMBER OF THE FOLLOWING SCIENTIFIC SOCIETIES

2012 Commissione di Fisica del Suolo della Società Italiana di Scienza del Suolo (SISS).

2006- Società Italiana di Agronomia

2010- Società Italiana di Scienza del Suolo

2004 European Society for Agronomy

2004 International Scientific Computing Group, University of Heidelberg, Germania.

2001- European Geoscience Union (EGU)

1999-2001: IGERT/NSF (Integrated Graduate Education Research Training/ National Science Foundation).

1998 Soil Science Society of America

REVIEWER FOR THE FOLLOWING INSTITUTIONS AND JOURNALS

Ministero dell'Istruzione, dell'Università e della Ricerca (MIUR).

National Science Foundation (NSF) of the United States of America.

Agronomy Journal

European Journal of Agronomy

Italian Journal of Agronomy

Horticultural Technology

American Society of Agricultural and Biological Engineers

Water Resources Research

Soil Science Society of American Journal

Journal of Hydrology

Hydrological Processes

Geoderma

Australian Journal of Soil Science

Soil Science

European Journal of Soil Science

Geophysical Prospecting

Geophysics

Cold Regions Science and Technology

Applied Physics

Cryosphere

IEEE Transactions of Geoscience and Remote Sensing

Vadose Journal

DEPARTMENTAL ROLES AND SERVICES

2020- Responsible for the Internationalization of the Master program in Ecosystem Design and Management, PROGESA
<https://corsi.unibo.it/magistrale/ProgettazioneGestioneEcosistemi>

2018-2024 Responsible for an exchange program with Indian Institute of Science (IISc), Bangalore, India, within a formal agreement between UniBo and IISc.

2006-2016. Coordinator of the International Master in Land and Water Conservation, a dual Master's Program established between UniBo and Washington State University (WSU).

2008-2014. Responsible of students exchanges with Washington State University (WSU) and University of Florida (UF), within formal agreements between UniBo, WSU and UF.

2010-2016. Responsible for the ERASMUS exchange program with Finland.

PUBLICATION METRICS

H-Index Scopus = 24, H-Index Google Scholar = 28

Number of peer reviewed papers = 64

Number of conference proceedings = 41

Number of Books = 2 + 1 (in press)

Number of book chapters = 7

BOOKS

2022. Bittelli M., R. Olmi and R. Rosa. Random Processes Analysis with R. *Oxford University Press*, in press.

2020. Bittelli M., G.S. Campbell and F. Tomei. Soil Physics with Python-Transport in the Soil Plant Atmosphere System. *Oxford University Press*. Second Edition. ISBN: 9780198854791

2017. Huffaker, R., M. Bittelli and R. Rosa. Non Linear Time Series Analysis with R. *Oxford University Press*. ISBN: 9780198782933

2015. Bittelli M., G.S. Campbell and F. Tomei. Soil Physics with Python-Transport in the Soil Plant Atmosphere System. *Oxford University Press*. First Edition. ISBN: 9780198854791

REFEREED JOURNAL ARTICLES

2021. Bittelli M., F. Tomei, P. Anbazhagan, R.R. Pallapati, P. Mahajan, C. Meisina, M. Bordoni and R. Valentino. Measurement of Soil Bulk Density and Water Content with Time Domain Reflectometry: Algorithm Implementation and Method Analysis, *Journal of Hydrology*, 598, 126389.

2021. Olmi R., M. Bittelli, G. Picard, L. Arnaud, A. Mialon and S. Priori. Investigating the influence of the grain size and distribution on the macroscopic dielectric properties of Antarctic firn. *Cold Regions Science and Technology*, 185, 103254

2021. Ghanbarian B., A. Hunt, M. Bittelli, M. Tuller and E. Arthur. Estimating specific surface area: Incorporating the effect of surface roughness and probing molecule size. *Soil Science Society of America Journal*, 1–12.

2021. Bordoni M., F. Inzaghi, V. Vivaldi, R. Valentino, M. Bittelli and C. Meisina. Data-Driven Method for the Temporal Estimation of Soil Water Potential and Its Application for Shallow Landslides Prediction. *Water*, 13, 1208.

2021. Bordoni M., M. Bittelli, R. Valentino, V. Vivaldi and C. Meisina. Observations on soil-atmosphere interactions after long-term monitoring at two sample sites subjected to shallow landslides. *Bull Eng Geol Environ* (2021). <https://doi.org/10.1007/s10064-021-02334-y>

2020. Anbazhagan P., M. Bittelli, R. Palapati and P. Mahajan. Comparison of Soil Water Content Estimation Equations using Ground Penetrating Radar, *Journal of Hydrology*, 588, 125039.

2020. Rocchi I., C.G. Gagnano, L. Govoni, M. Bittelli and G. Gottardi. Assessing the performance of a versatile and affordable geotechnical monitoring system for river embankments. *Physics and Chemistry of the Earth*, 10287.

2019. Bordoni, M., B. Corradini, L. Lucchelli, R. Valentino, M. Bittelli, V. Vivaldi and C. Meisina. Comparison Between Empirical and Physically-Based Thresholds for the Occurrence of Shallow Landslides in a Prone Area of Northern Italian Apennines. *Water*, Special Issue: Rainfall Thresholds and Other Approaches for Landslide Prediction and Early Warning, doi:10.3390/w11122653, 11, 1-28.

2019. Meisina C., M. Bittelli, R. Valentino, M. Bordoni and R.T. Jover. Advances in Shallow Landslide Hydrology and Triggering Mechanisms: A Multidisciplinary Approach. *Geofluids*, 1607684, doi.org/10.1155/2019/1607684
2019. Bittelli M., M.C. Andrenelli, G. Simonetti, S. Pellegrini, G. Artioli, I. Piccoli and F. Morari. Shall we abandon sedimentation methods for particle size analysis in soils ? *Soil and Tillage Research*, 185, pp.36-46.
2018. Bordoni M., R. Valentino, M. Bittelli, C. Meisina and S. Chersich. A Simplified Approach to Assess the Soil Saturation Degree and Stability of a Representative Slope Affected by Shallow Landslides in Oltrepo' Pavese (Italy). *Geosciences*, 8, 472.
2018. Strati V., M. Alberi, S. Anconelli, M. Baldoncini, M. Bittelli, C. Bottardi, E. Chiarelli, B. Fabbri, Guidi V., K.G.C. Raptis , D. Solimando, F. Tomei, G. Villani and F. Mantovani. Modelling soil water content in a tomato field: Proximal gamma ray spectroscopy and soil-crop system models. *Agriculture*, 8(4), pp.1-18.
2018. Rocchi I., C.G. Gragnano, L. Govoni, A. Mentani, M. Bittelli, P. Castiglione, O. Buzzi and G. Gottardi. A new technique for deep in situ measurements of soil water retention behaviour. *Geotechnical Research*, pp.1-10.
2018. Lo Presti D., S. Stacul, C. Meisina, M. Bordoni and M. Bittelli. Preliminary Validation of a Novel Method for the Assessment of Effective Stress State in Partially Saturated Soils by Cone Penetration Tests. *Geosciences*, 8(1), 30.
2018. Bordoni M., M. Bittelli, R. Valentino, S. Chersich, M.G. Persichillo and C. Meisina. Soil Water Content Estimated by Support Vector Machine for the Assessment of Shallow Landslides Triggering: the Role of Antecedent Meteorological Conditions. *Environmental Modeling and Assessment*, doi:10.1007/s10666-017-9586-y, pp.1-20.
2017. Olmi R. and M. Bittelli. Editorial for special section on electromagnetic aquametry. *Measurement Science and Technology*, Special Section in Electromagnetic Aquametry, doi:10.1088/1361-6501/aa7322. Vol.28, 8.
2017. Kroener, E., Campbell, G.S. and M. Bittelli. Estimation of thermal instabilities in soils around underground electrical power cables. *Vadose Zone Journal*, vol. 16 (9), pp.1-13.
2017. Bordoni M., M. Bittelli, R. Valentino, S. Chersich and C. Meisina. Improving the estimation of complete field soil water characteristic curves through field monitoring data. *Journal of Hydrology*, vol. 552, pp.283-305.
2017. Olmi R. and M. Bittelli. Can molecular dynamics help in understanding dielectric phenomena? *Measurement Science and Technology*, Special Section in Electromagnetic Aquametry, Vol.28, 1, pp. 1-7.
2016. Oclon P., M. Bittelli, P. Cisek, E. Kroener, M. Pilarczyk, D. Taler, R. Rao and A. Vallati. The performance analysis of a new thermal backfill material for underground power cable system. *Applied Thermal Engineering*, 02, pp. 233-250.
2016. Gottardi, G., C.G. Gragnano, I. Rocchi, M. Bittelli M. Assessing River Embankment Stability under Transient Seepage Conditions. *Procedia Engineering*, vol. 158, pp.350-355.
2016. Kroener E., M. Zarebanadkouki, M. Bittelli and A. Carminati. Simulation of root water uptake under consideration of nonequilibrium dynamics in the rhizosphere. *Water Resources Research*, doi:10.1002/2015WR018579.
2016. Bordoni M., C. Meisina, A. Vercesi, G.B. Bischetti, E.A. Chiaradia, C. Vergani, S. Chersich, R. Valentino, M. Bittelli, R. Comolli, M.G. Persichillo and A. Cislighi. Quantifying the contribution of grapevine roots to soil mechanical reinforcement in an area susceptible to shallow landslides. *Soil & Tillage Research*, 163, 195-206.
2015. Olmi R. and M. Bittelli. Dielectric data analysis: recovering hidden relaxations by fourth-order derivative spectroscopy. *IEEE Transactions on Dielectrics and Electrical Insulation*, 22(6):3334-3340.
2015. Galiceanu M., Jurjiu A., Volta A. and M. Bittelli. Dynamics Solved by the Three-Point Formula: Exact Analytical Results for Rings. *Braz. J. Phys.*, DOI 10.1007/s13538-015-0371-6.
2015. Bordoni M., C. Meisina, R. Valentino, M. Bittelli and S. Chersich. Site-specific to local-scale shallow landslides triggering zones assessment using TRIGRS. *Nat. Hazards Earth Syst. Sci.*, 15, 1025-1050.
2015. Bordoni M., C. Meisina, R. Valentino, N. Lu, M. Bittelli and S. Chersich. Hydrological factors affecting rainfall-induced shallow landslides: From the field monitoring to a simplified slope stability analysis. *Eng. Geol.*, 193, 19-37.

2015. Huffaker, R. and M. Bittelli. A nonlinear dynamics approach for incorporating wind-speed patterns into wind-power project evaluation. *PLOS ONE*, 10, e0115123.
2014. Pieri L., M. Poggio, M. Vignudelli and M. Bittelli. Evaluation of the WEPP model and digital elevation grid size, for simulation of streamflow and sediment yield in a heterogeneous catchment. *Earth Surf. Processes*, 39, 1331-1344.
2014. Kroener E., A. Vallati and M. Bittelli. Numerical simulation of coupled heat, liquid water and water vapor in soils for heat dissipation of underground electrical power cables. *Appl. Therm. Eng.*, 70, (1), 510-523.
2014. Pieri L., F. Ventura, M. Hanuskova and M. Bittelli. Rainfall, streamflow and sediment relationship in a hilly semi-agricultural catchment in Northern Italy. *Ital. J. Agrometeorol.*, 2, 29-42.
2013. Bordoni M., D. Zizioli, C. Meisina, R. Valentino, M. Bittelli and S. Chersich. Monitoring of a slope susceptibility to shallow landslides: preliminary results. Online rep. *Ital. Geol. Soc.*, 24, 1-31.
2012. Lacava T., L. Matgen, L. Brocca, M. Bittelli, N. Pergola, T. Moramarco and V. Tramutoli. A First Assessment of the SMOS Soil Moisture Product With In Situ and Modeled Data in Italy and Luxembourg. *IEEE Geosci. Remote S.*, 50, 1612-1622.
2012. Solone R., M. Bittelli, F. Tomei and F. Morari. Errors in water retention curves determined with pressure plates: Effects on the soil water balance. *J. Hydrol.*, 470-471, 65-74.
2012. Bittelli M., R. Valentino, F. Salvatorelli and P. Rossi Pisa. Monitoring soil-water and displacement conditions leading to landslide occurrence in partially saturated clays. *Geomorphology*, 173-174, 161-173.
2011. Brocca L., S. Hasenauer, T. Lacava, F. Melone, T. Moramarco, W. Wagner, W. Dorigo, P. Matgen, J. Martinez Fernandez, P. Llorens, J. Latron, C. Martin, M. Bittelli. Soil moisture estimation through ASCAT and AMSR-E sensors: An intercomparison and validation study across Europe, *Remote Sens. Environ.* 115(12), 3390-3408.
2011. Bittelli M. Measuring Soil Water Content: A Review. *Hort. Tech.* , 48, 1-15.
2011. Valentino R., L. Montrasio, G. Losi and M. Bittelli. An empirical model for the evaluation of the degree of saturation of shallow soils in relation to rainfalls. *Can. Geotech. J.* , 48, 1-15.
2011. Spisni A., F. Tomei, S. Pignone, E. Muzzi, A. Panzacchi, G. Antolini, G. Villani, M. di Lorenzo, R. Foraci, M. Bittelli and E.S. Brooks. Snow cover analysis in Emilia-Romagna. *Ital. J. Remote Sens.* , 43(1), 59-73.
2010. M. Di Prinzio, M. Bittelli, A. Castellarin and P. Rossi Pisa. Application of GPR to the monitoring of river embankments. *J. Appl. Geophys.* , 71, 53-61.
2010. M. Bittelli, Measuring Soil Water Potential for Water Management in Agriculture: A Review. *Sustainability* , 2(5), 1226-1251.
2010. M. Bittelli, F. Tomei, A. Pistocchi, M. Flury, J. Boll, E. S. Brooks and G. Antolini. Development and testing of a physically based, three-dimensional model of surface and subsurface hydrology. *Adv. Wat. Resour.* , 33, 106-122.
2009. Bitelli G., M. Bittelli, F. Boschi, N. Marchetti, P. Rossi Pisa, L. Vittuari. An integrated approach for the use of GPS and GPR in archaeological sites: a case-study at Tilmän Höyük in southeastern Turkey. *Ocnus* , 17, 89-99.
2009. Pieri, L., M. Bittelli, M. Hanuskova, F. Ventura, A. Vicari and P. Rossi Pisa. Characteristics of eroded sediments from a soil under wheat and maize in the North Italian Apennines. *Geoderma*, 154, 20-29.
2009. Bittelli M. and M. Flury. Errors in water retention curves determined with pressure plates. *Soil Sci. Soc. Am. J.*, 73, 1453-1460.
2009. Bittelli M. , E. Guerra, R. Solone, M. Guermandi, N. Laruccia e V. Marletto. Confronto tra diverse misure di laboratorio della curva di ritenzione idrica dei suoli per il miglioramento della stima del bilancio idrico in Emilia-Romagna. *Riv. It. AgroMet.* , 14(2), 94-95.
2008. Pistocchi A., F. Bouraoui, M. Bittelli. A simplified parameterization of the monthly topsoil water budget. *Water Resour. Res.*, DOI:10.1029/2007WR006603.

2008. Bittelli M., F. Ventura, G. S. Campbell, R. L. Snyder, F. Gallegati and P. Rossi Pisa. Coupling of heat, water vapor, and liquid water fluxes to compute evaporation in bare soils. *J. Hydrol.*, 362, (3-4), 191-205.
2008. Bittelli M., F. Salvatorelli and P. Rossi Pisa. Correction of TDR-based soil water content measurements in conductive soils. *Geoderma*, 143, 133-142.
2008. Mantovani D., M. Bittelli, W. J. Elliot, J. Q. Wu, S. Dun, M. Vignudelli, P. Rossi Pisa. Stream Flow Modeling Using WEPP (Water Erosion Prediction Project) in a Northern Italian Watershed. *Ital. J. Agron.*, 3, 791-792.
2008. Rossi Pisa P., G. Bitelli, M. Bittelli, P. Catizone, L. Ferroni, M. Speranza, M. Vignudelli, N. Marchetti. Agro-Environmental Approach and Management of Mediterranean Archaeological Areas. *Ital. J. Agron.*, 3, 809-811.
2007. Tomei F., G. Antolini, M. Bittelli, V. Marletto, Pasquali A. e M. Van Soetendael. Validazione del Modello di Bilancio Idrico Criteria. *Ital. J. Agrometeorol.*, 1, 66-67.
2007. Pieri L., M. Bittelli, J. Q. Wu, S. Dun, D. C. Flanagan, P. Rossi Pisa, F. Ventura, and F. Salvatorelli. Using the Water Erosion Prediction Project (WEPP) Model to Simulate Field-Observed Runoff and Erosion in the Apennines Mountain Range, Italy. *J. Hydrol.*, 336, 84-97.
2006. Pieri, L., M. Bittelli and P. Rossi Pisa. Laser Diffraction, Transmission Electron Microscopy and Image Analysis to evaluate a Bimodal Gaussian Model for Particle Size Distribution in Soils. *Geoderma*, 135, 118-132.
2006. Marletto, V., L. Bottarelli, A. Pasquali and M. Bittelli. Sonde e antenne per valutare lo stato idrico dei suoli. *Agricoltura*, 2, 90-91.
2004. Bittelli M., M. Flury, G. S. Campbell and V. Schulz. Characterization of a spiral shaped time domain reflectometry probe. *Water Resour. Res.*, 40, DOI:10.1029/2004WR003027.
2004. Bittelli M., M. Flury and K. Roth. Use of Dielectric Spectroscopy to Estimate Ice Content in Frozen Porous Media. *Water Resour. Res.*, 40, W04212.
2003. Bittelli M., M. Flury and G.S. Campbell. A Thermo-Dielectric Analyser to measure the freezing and moisture characteristic of porous media. *Water Resour. Res.*, 39, 1041.
2002. Bittelli M. Book review: Conceptual Models of Flow and Transport in the Fractured Vadose Zone. *Vadose Zone Journal*, 1, 200-201.
2001. Posadas, A. N. D., Gimenez D., Bittelli M., C. M. P. Vaz and M. Flury. Multifractal Characterization of Soil Particle-Size Distributions. *Soil Sci. Soc. Am. J.*, 65(5), 1361-1367.
2001. Bittelli M., M. Flury, G.S. Campbell and E. J. Nichols. Reduction of transpiration through foliar application of Chitosan. *Agric. For. Meteorol.*, 107, 167-175.
1999. Bittelli M., G.S. Campbell and M. Flury. Characterization of Particle Size Distribution in soils using a Fragmentation Model. *Soil Sci. Soc. Am. J.*, 63, 782-788.
1999. Donatelli M., C.O. Stockle, R. Nelson, C. Gardi, M. Bittelli and G.S. Campbell. Using the software CropSyst and ArcView in evaluating the effects of management in cropping systems in two areas of the low Po Valley. *Revista de Ciencias Agrarias*, 22,(1), 1-25.

BOOK CHAPTERS

2017. Ruairuen W., G. J. Fochesatto, M. Bittelli, E. B. Sparrow, M. Zhang and W. Schnabel. Evapotranspiration in Northern Agro-Ecosystems: Numerical Simulation and Experimental Comparison. In book: "Current Perspective to Predict Actual Evapotranspiration", Ed. Daniel Bucur, Chapter 4, pp.65-84. ISBN 978-953-51-3174-8, DOI: 10.5772/intechopen.68347.
2016. Bordoni M., C. Meisina, M. Bittelli and S. Chersich. Monitoring of hydrological parameters for the identification of shallow landslides triggering: A case study from Northern Italy. In book: *Landslides and Engineered Slopes. Experience, Theory and Practice*, pp.475-482. DOI: 10.1201/b21520-49.

2014. Bordoni M., D. Zizioli, C. Meisina, R. Valentino, M. Bittelli and S. Chersich. Rainfall-Induced Landslides: Slope Stability Analysis Through Field Monitoring. In: *Landslide Science for a Safer Geoenvironment*. Eds. K. Sassa, P. Canuti and Y. Yin, pp. 273-279, Springer. ISBN: 978-3-319-04995-3 (Print), 978-3-319-04996-0 (Online).

2011. Bittelli, M., A. Pistocchi, F. Tomei, P. P. Roggero, R. Orsini, M. Toderi, G. Antolini and M. Flury. CRITERIA-3D: A Mechanistic Model for Surface and Subsurface Hydrology for Small Catchments. In: *Land Use and Agriculture Measurement and Modelling*. Ed. M. K. Shukla, CABI Publishing. ISBN: 184593797X.

2009. M. Bittelli, Georadar, In: *Groma 2. In profondità senza scavare*, Ed. E. Giorgi, Casa Editrice BraDypUS, Bologna, pp. 251-272.

2008. Paola Rossi Pisa, Gabriele Bitelli, Marco Bittelli, Maria Speranza, Lucia Ferroni, Pietro Catizone and Marco Vignudelli. Environmental Assessment of an Archaeological Site for the Development of an Archaeological Park. ARCHAIA. Case studies on Research Planning, Characterisation, Conservation and Management of Archaeological Sites. Ed. N. Marchetti and I. Thuesen. Archaeopress, Oxford, England.