

CURRICULUM VITAE

PERSONAL INFORMATION

Name

Giacomo Bertoldi

PROFESSIONAL RECORD

January 2008 – Present

- Main activities and responsibilities

Senior researcher at Institute for the Alpine Environment, EURAC, Bolzano/Bozen, Italy.

Analysis of the impacts of land cover and climate changes on the water cycle and ecosystem services in Alpine environments. Ecohydrological modeling of land-surface interactions.

August 2005 – December 2007

- Main activities and responsibilities

Research associate at Duke University, USA, Department of Civil and Environmental Engineering.

Development and implementation of a framework for merging remotely sensed land surface data into a Large Eddy Simulation (LES) model to account for effects of land cover variability on regional surface fluxes. The research was supported by NASA in collaboration with the USDA-ARS Hydrology and Remote Sensing Laboratory of Beltsville, MD.

August 2004 – August 2005

- Main activities and responsibilities

Post-doctoral fellowship at the University of Trento, Italy, Department of Civil and Environmental Engineering.

Development and application of the distributed hydrological model GEOTOP for the European project AQUATERRA (VI EU framework), on integrated modeling at watershed and regional scale in the context of land-use and climate change.

November 2000 – July 2004

- Main activities and responsibilities

Ph. D. candidate at the University of Trento, Italy, Department of Civil and Environmental Engineering.

Research activity has been mainly directed to model the hydrological cycle and land-surface processes in small basins. A numerical model, called GEOTOP, has been developed.

The GEOTOP model is a distributed hydrological model, which aims at estimating in an integrated way the catchment water budget and the spatial distribution of numerous hydro-meteorological variables like soil moisture, surface temperature, radiation fluxes and heat fluxes into the soil, surface and subsurface water flows, water table depth and water potential.

The model can be coupled with remote sensing observation and forced by regional climate model outputs for local scale scenarios evaluation.

The code and documentation on the GEOTOP model is available on line at the web pages:

<http://www.geotop.org/cgi-bin/moin.cgi/FrontPage>

<http://eprints.biblio.unitn.it/archive/00000551/>

<http://www.ing.unitn.it/dica/eng/monographs/index.php>

EDUCATION

20 November 2013

Italian national scientific qualification as Associate Professor – sector 08/A1 – Hydraulics, hydrology, hydraulic and marine construction (as defined in D.D. 222 of 20/07/2012)

02 July 2004

- Dissertation title

Ph.D. in Environmental Engineering, University of Trento, Italy. Specialization: Hydrology
“The water and energy balance at basin scale: a distributed modeling approach”, supervisor prof. Riccardo Rigon (University of Trento, Italy).

18 October 2000

M.S. in Environmental Engineering University of Trento, Italy, full marks 110/100 with honors.

• Dissertation title	"A study of the soil-atmosphere interactions at basin scale, using a distributed model", supervisor prof. Riccardo Rigon.
1993	School leaving certificate at the Liceo Scientifico "G. Galilei" (Trento), with full marks.
LANGUAGES	Italian (native language), English (fluent), German (good – B2). Spanish (basic)
AREA OF EXPERTISE AND RESEARCH INTERESTS	- Hydrology: distributed numerical modeling, land surface interactions, evaporation estimation, catchment hydrology, flood forecasting and management, snow processes, landslides and debris flows. - Ecology: eco – hydrology, dynamic vegetation models. - Remote sensing: use of remote sensing data for distributed eco – hydrological models. - Hydrometeorology: atmospheric boundary layer physics, computational fluid dynamic, turbulence modeling. - Geomorphology: Geographic Information Systems (GIS), morphological analyses, catchments morphology.
COMPUTING SKILLS	- Programming languages: C, Fortran, Linux bash. - GIS systems: GRASS, ArcGis. - Software: Matlab, Mathematica, Autocad, Office.
ABROAD RESEARCH PERIODS	
20 July – 20 October 2001	- Visiting Scholar at the Hydrosystem Laboratory of the University of Illinois at Urbana Champaign (USA) and at the U.S. Geological Survey of Illinois, advisors P. Kumar and T. M. Over.
27 August – 23 December 2003	- Education Abroad Program exchange Ph. D. student at the University of California Berkeley, Department of Earth and Planetary Science and Lawrence Berkeley National Laboratory, advisors W. E. Dietrich and N. L. Miller.
August 2005 – December 2007	- Research Associate at the Department of Civil and Environmental Engineering, Duke University, NC, USA.
PROFESSIONAL SERVICE	- Member of the <i>American Geophysical Union</i>, of the <i>European Geophysical Union</i>, of the <i>American Meteorological Society</i> since 2001. - Member of the Engineering Italian Union since 30/1/2001, Province of Trento, id. 2176. - Reviewer of ISI journals: <i>Agronomy and Soil</i>, <i>Biogeoscience</i>, <i>Agricultural and Forest Meteorology</i>, <i>Geoscientific Model Development</i>, <i>Water Resources Research</i>, <i>Hydrology and Earth System Sciences</i>, <i>Geophysical Research Letters</i>, <i>Journal of Geophysical Research</i>, <i>J. of Hydrology</i>, <i>J. of Hydrometeorology</i>, <i>Hydrological Sciences J.</i>, <i>Ecohydrology</i>, <i>J. of Selected Topics in Applied Earth Observations and Remote Sensing</i>, <i>Landscape Ecology</i>, <i>Remote Sensing</i>, <i>Hydrological Processes</i>, <i>Plant and Soil</i>. - Professional snow observer for avalanche risk assessment, since 1997. - Operator and assistant of artificial avalanches triggering, since 1999..
FINANCED RESEARCH PROJECTS	- "Exploitation of 10-Years Time Series of ASAR images for Monitoring of Soil Moisture Content in Mountain Areas", ESA European Space Agency, id: 14572, co-investigator, P.I. Claudia Notarnicola, EURAC, duration 2013 – 2015. - HiResAlp, "An innovative framework for the Integration of multi-source data to determine soil moisture and evapotranspiration at high resolution in Alpine regions" 1/2013 – 1/2016. Role: co P.I. and responsible of the activities of the EURAC Institute for Alpine Environment, P.I. Claudia Notarnicola Eurac. Supported by the Provincia Autonoma di Bolzano (Italy), for the 1° bando di concorso per progetti nel campo della ricerca scientifica (Articolo 9, legge provinciale del 13 dicembre 2006, n. 14), 297'000 Euro.

- **EMERGE, “Retreating glaciers and emerging ecosystems in the Southern Alps, duration”** 1/2011 – 1/2014. Role: responsible of WP1: “Analyzing the physical drivers of ecosystem changes”. Stephan Zerbe, University of Bolzano. Founded by the Förderprogramm 2010 Herzog-Sellenberg- und Dr. Erich Ritter-Stiftung, Germany, 210'000 Euro.
- **HydroAlp, “Modelling the interaction between water cycle, vegetation and climate in Alpine environments”**, duration 3/2011 – 3/2014. Role: PI lead partner and scientific coordinator, supported by the Provincia Autonoma di Bolzano (Italy), for the 1° bando di concorso per progetti nel campo della ricerca scientifica (Articolo 9, legge provinciale del 13 dicembre 2006, n. 14), 285'568 Euro.
- **Bando post doc 2006 della Provincia Autonoma di Trento**: three year support of 140'000 Euros for the project **ISVAT “Modeling at local scale the water cycle and the land vegetation atmosphere interactions as function of climate change scenarios”**, to perform at the Department of Environmental Engineering of the University of Trento. Role: PI.

PUBLICATIONS PEER REVIEWED

- 2015 - Mair E., Leitinger G., Della Chiesa S., Niedrist G., Tappeiner U., Bertoldi G.: A simple method to combine snow height and meteorological observations to estimate winter precipitation at sub-daily resolution, submitted to Journal of Hydrological Sciences. Accepted July 2015.
- 2015 - Engel M., Penna D., Bertoldi G., Dell'Agnese A., Soulsby C., Comiti F., Identifying runoff contributions and mixing processes during melt-induced runoff events in a glacierized Alpine catchment. Hydrological Processes. Accepted Mai 2015.
- 2015 - Pasolli, L., Notarnicola, C., Bertoldi, G., Bruzzone, L., Remegaldo, R., Niedrist, G., Della Chiesa S., Tappeiner, U., Zebisch, M. (2015). Estimation of Soil Moisture in Mountain Areas Using SVR Technique Applied to Multiscale Active Radar Images at C-Band. Selected Topics in Applied Earth Observations and Remote Sensing, IEEE Journal of, 8(1), 262–283. doi:10.1109/JSTARS.2014.2378795
- 2014 - Penna D, Engel M, Mao L, Dell'Agnese A, Bertoldi G, Comiti F. 2014. Tracer-based analysis of spatial and temporal variation of water sources in a glacierized catchment. Hydrology and Earth System Sciences 8, 5271-5288, 2014. doi:10.5194/hess-18-5271-2014.
- 2014 - Pasolli, L., Notarnicola, C., Bertoldi, G., Della Chiesa S., Niedrist, G., Bruzzone, L., Tappeiner, U., Zebisch, M. : Soil moisture monitoring in mountain areas by using high-resolution SAR images: results from a feasibility study. European Journal of Soil Science, n/a–n/a (2014). doi:10.1111/ejss.12189
- 2014 - Bertoldi, G., Della Chiesa, S., Notarnicola, C., Pasolli, L., Niedrist, G., Tappeiner, U. Estimation of soil moisture patterns in mountain grasslands by means of SAR RADARSAT2 images and hydrological modeling. J. Hydrol. (2014), <http://dx.doi.org/10.1016/j.jhydrol.2014.02.018>
- 2014 Della Chiesa, S., Bertoldi, G., Niedrist, G., Obojes, N., Endrizzi, S., Alberson, J. D., Wohlfahrt, G., Hörtnagl, L., Tappeiner, U. (2014). Modeling changes in grassland hydrological cycling along an elevational gradient in the Alps. Ecohydrology, (2014). <http://dx.doi.org/10.1002/eco.1471>
- 2013 - Penna, D., Mao, L., Comiti, F., Engel, M., Agnese, A. D., and Bertoldi, G. (2013). Hydrological effects of glacier melt and snowmelt in a high-elevation catchment. Die Bodenkultur, 64, 93–98.
- 2013 - Bertoldi, G., Kustas W. P., and Albertson J. D., Evaluating source area contributions from aircraft flux measurements over heterogeneous land using large-eddy simulation, Boundary-Layer Meteorology, 147, 261-279, doi:10.1007/s10546-012-9781-y, 2013.
- 2011 - Pasolli L., Notarnicola C., Bruzzone L., Bertoldi G., Della Chiesa S., Niedrist G., Tappeiner U., Zebisch M., Polarimetric radarsat2 imagery for soil moisture retrieval in alpine areas, *Canadian Journal of Remote Sensing*, 37(5), 535-547, doi: 10.5589/m11-065, 2011.
- 2011 - Rigon, R., D'Odorico, P., and Bertoldi, G.: The geomorphic structure of the runoff peak, *Hydrol. Earth Syst. Sci.*, 15, 1853-1863, doi:10.5194/hess-15-1853, 2011.
- 2011 - Pasolli L., Notarnicola C., Bruzzone L., Bertoldi G., Della Chiesa S., Hell V., Niedrist G., Tappeiner U., Zebisch M., Del Frate F. and Vaglio Laurin G., Estimation of Soil Moisture in an Alpine Catchment with RADARSAT2 Images, *Applied and Environmental Soil Science*, vol. 2011, Article ID 175473, 12 pages, doi:10.1155/2011/175473, 2011.
- 2010 - Bertoldi G., Notarnicola C., Leitinger G., Endrizzi S., Zebisch M., Della Chiesa S. and Tappeiner U., Topographical and ecohydrological controls on land surface temperature in an Alpine catchment, *Ecohydrology*, 3, 189 – 204, doi:10.1002/eco.129, 2010.

- 2009 - Gebremichael, M., Rigon, R., Bertoldi, G., and Over, T. M.: On the scaling characteristics of observed and simulated spatial soil moisture fields, *Nonlin. Processes Geophys.*, 16, 141-150, 2009.
- 2008 - Bertoldi, G., Kustas W. P., and Albertson J. D., Estimating spatial variability in atmospheric properties over remotely sensed land-surface conditions, *Journal of Applied Meteorology and Climatology*, 47, 2147-2165, doi: 10.1175/2007JAMC1828.1, 2008.
- 2008 - Timmermans W. J., Bertoldi G., Albertson J. D., Oliso A., Su Z., and Gieske A. S. M., Accounting for atmospheric boundary layer variability on flux estimation from RS observations, *International Journal of Remote Sensing*, 29:17, 5275 – 5290, 2008.
- 2008 - Simoni, S., Zanotti, F., Bertoldi, G. and Rigon R., Modelling the probability of occurrence of shallow landslides and channelized debris flows using GEOTop-FS, *Hydrological Processes*, doi: 10.1002/hyp.6886, 2008.
- 2007 - Bertoldi G., Albertson J. D., Kustas W. P., Li F., and Anderson M. C., On the opposing roles of air temperature and wind speed variability in flux estimation from remotely sensed land surface states, *Water Resources Research*, 43, W10433, doi:10.1029/2007WR005911, 2007.
- 2006 - Rigon R., Bertoldi G. and Over T.M., GEOTop: A Distributed Hydrological Model with Coupled Water and Energy Budgets, *Journal of Hydrometeorology*, 7, 371-388, 2006.
- 2006 - Bertoldi G., Rigon R., and Over T. M., Impact of Watershed Geomorphic Characteristics on the Energy and Water Budgets. *Journal of Hydrometeorology*, 7, 389-403, 2006.
- 2004 - Zanotti, F., Endrizzi, S., Bertoldi, G. and Rigon R., The GEOTOP snow module, *Hydrological Processes*, 18, 3667–3679, 2004.

PUBLICATIONS IN REVISION

- 2015 - Greifeneder F., Notarnicola C., Bertoldi G., Niedrist G., and Wagner W. From point to pixel scale: An upscaling approach for in-situ soil moisture measurements Vadose Zone Journal, submitted March 2015.
- 2015 - Engel M., Bertoldi G., Endrizzi S., Notarnicola C., Ventura B., Niedrist G., Comiti F., Scale-variable model evaluation in a glacierized catchment. *Hydrological Processes*. Submitted Mai 2015.
- 2014 - Anagnostou M., Nikolopoulos E. I., Kalogiros J., Anagnostou N. E., Marra F., Mair E., Bertoldi G., Tappeiner U., Borga M.: Hydrological Evaluation of X-band Polarimetric Radar Rainfall Estimation in a Mountainous Region, submitted to *Journal of Hydrology*, December 2014.
- 2014 - Niedrist, G. Tasser E., Bertoldi G., Della Chiesa S., Obojes N., Egarter-Vigl L. and Tappeiner U. Transplanted mountain meadows react with increasing phytomass and shifting species composition. But is it all warming? Submitted to *Agriculture, Ecosystems and Environment* (December 2014).

ON – LINE PUBLICATIONS

- 2012 - Bertoldi G., Rigon R. and Tappeiner U. Modeling Evapotranspiration Patterns in Alpine Catchments, in *Evapotranspiration - Remote sensing and Modeling*, 2012, Ayse Irmak (Ed.), 514 pages, ISBN 979-953-307-009-3, InTech - Open Access Publisher, doi: 10.5772/21497 , Available from: <http://www.intechopen.com/books/evapotranspiration-remote-sensing-and-modeling/modelling-evapotranspiration-and-the-surface-energy-budget-in-alpine-catchments>.
- 2004 - Bertoldi G., The water and energy balance at basin scale: a distributed modeling approach, University of Trento, *Monograph of the School of Doctoral Studies in Environmental Engineering*, 202 pp., ISBN 88-8443-069-0, 2004, <http://www.ing.unitn.it/dica/eng/monographs/index.php>
- 2004 - Bertoldi G. and Rigon R., GEOTOP: a hydrological balance model: technical description and programs guide, version 0.75, *Technical Report DICA-04-001*, University of Trento, Italy, April 2004. <http://eprints.biblio.unitn.it/archive/00000551/>

PROCEEDINGS

- 2015 - Greifeneder F., Notarnicola C., Bertoldi G., Brenner J., Wagner W. (2014): A NOVEL APPROACH TO IMPROVE SPATIAL DETAIL IN MODELED SOIL MOISTURE THROUGH THE INTEGRATION OF REMOTE SENSING DATA, IGARSS 2015 conference, Milano, Italy 26-31/7/2015.
- 2015 - Penna, D., Engel, M., Bertoldi, G., Comiti, F.: Water sources, runoff contributions and mixing processes investigated by stable isotopes of water and electrical conductivity: a study in a

- glacierized catchment in the Italian Alps. Abstract id 186, IAEA International Symposium on Isotope Hydrology: Revisiting Foundations and Exploring Frontiers
Vienna, Austria 11 – 15 May 2015 Conference ID: 4652.
- 2015 - Comiti F., Dell'Agnese A., Lucia A., Engel M., Penna D., Mao L., Bertoldi G., 2015. Seasonality of sediment transport in a glacier-fed mountain stream. *Gravel Bed Rivers* 8, Kyoto, Japan, 14-18 September 2015.
- 2015 - Engel M., Bertoldi G., Penna D., Mao L., Dell'Agnese A., Comiti F., Zerbe S., 2014. The Matsch Glacier foreland (South Tyrol): an integrated analysis of snow cover dynamics, runoff generation and sediment transport. International Workshop: Ecology of glacier foreland. Obergurgl, Austria, 17-21 September 2014.
- 2014 - Anagnostou M. N., Nikolopoulos E. I., Kalogiros J., Anagnostou E. N., Marra F., Borga M., Mair E., Bertoldi G., Tappeiner U. (2014): High-resolution X-band polarimetric radar Observations during the HyMeX 2012 Special Observation Period in North-East Italian Alpine Region: Evaluating hydrologic impacts. Proceedings of ERAD 2014 - THE EIGHTH EUROPEAN CONFERENCE ON RADAR IN METEOROLOGY AND HYDROLOGY.
- 2014 - Stamenkovic J., C. Notarnicola, N. Spindler, G. Cuozzo, G. Bertoldi, G. Niedrist, S. Della Chiesa, F. Greifeneder, D. Tuia, M. Borgeaud, J. P. Thiran, (2014). Soil moisture estimation using synergy of optical, SAR, and topographic data with Gaussian process regression, *Proc. SPIE Remote Sensing* 92430R, Amsterdam, Netherlands, September 2014, doi:[10.1117/12.2072828](https://doi.org/10.1117/12.2072828).
- 2014 - Greifeneder, F. C. Notarnicola, G. Cuozzo, G. Bertoldi, S. Della Chiesa, G. Niedrist, J. Stamenkovic, W. Wagner: Estimation of surface soil moisture in alpine areas based on medium spatial resolution SAR time-series and upscaled in-situ measurements. *Proc. SPIE* 9243, SAR Image Analysis, Modeling, and Techniques XIV, 92430G (October 21, 2014); doi:10.1117/12.2071252.
- 2014 - Notarnicola, L. Pasolli, G. Cuozzo, F. Greifeneder, G. Bertoldi, S. Della Chiesa, G. Niedrist, D. Castelletti, U. Tappeiner, L. Bruzzone, M. Zebisch, TEMPORAL AND SPATIAL SOIL MOISTURE DYNAMICS IN MOUNTAIN MEADOWS BY INTEGRATING RADARSAT2 IMAGES AND GROUND DATA, IGARSS 2014&35th Canadian Symposium on Remote Sensing, Quebec, Canada, 13-18 July 2014.
- 2014 - Paloscia S., E. Santi, S. Pettinato, C. Notarnicola, G. Cuozzo, F. Greifeneder, G. Bertoldi, The use of Cosmo-SkyMed images for retrieving snow depth and soil moisture in mountainous areas, IGARSS 2014&35th Canadian Symposium on Remote Sensing, Quebec, Canada, 13-18 July 2014.
- 2014 - Brenner J., Bertoldi G., Della Chiesa S., Niedrist G., Tappeiner U., Bronstert A (2014): Modellazione degli impatti del cambiamento climatico sulla distribuzione spaziale dell'evapotraspirazione, dell'umidità del terreno e del manto nevoso in una vallata alpina. Atti del XXXIV Convegno Nazionale di Idraulica e Costruzioni Idrauliche, pp 364-365, Bari, 7-10 Settembre 2014.
- 2014 - Bertoldi G., Notarnicola C., Greifeneder F., Cuozzo G., Della Chiesa S., Niedrist G., Tappeiner U. (2014): Un confronto multi-temporale tra la stima dell'umidità del terreno con immagini SAR e modello idrologico in ambito alpino. Atti del XXXIV Convegno Nazionale di Idraulica e Costruzioni Idrauliche, pp 301-302, Bari, 7-10 Settembre 2014.
- 2013 - Mair E., Bertoldi G., Leitingner G., Della Chiesa S., Niedrist G., Tappeiner U.: ESOLIP – estimate of solid and liquid precipitation at sub-daily time resolution by combining snow height and rain gauge measurements, *Hydrol. Earth Syst. Sci. Discuss.*, 10, 8683-8714, doi:10.5194/hessd-10-8683-2013
- 2013 - Bertoldi G., Notarnicola C., Della Chiesa S., Niedrist G., Pasolli L., Tappeiner U. "How far can be SAR considered a tool for mountain hydrology? ", *Proc. SPIE* 8891, SAR Image Analysis, Modeling, and Techniques XIII, 88910G (October 17, 2013); doi:10.1117/12.2031717; <http://dx.doi.org/10.1117/12.2031717>
- 2013 - Comiti F., Dell'Agnese A., Mao L., Vela A. L., Penna D., Bertoldi G., 2013. Temporal variations of bedload transport in a glacierized mountain basin. Book of abstracts, 8th IAG International Conference on Geomorphology, Paris, 27-31 August 2013 (conference paper).
- 2012 - Penna D., Mao L., Comiti F., Engel M., Dell'Agnese A., Bertoldi G., 2012. Effects of glaciers on runoff and suspended sediment transport in a high-elevation experimental catchment. "Euromediterranean Network of Experimental and Representative Basins. 14th Biennial Conference ERB 2012 on Studies of Hydrological Processes in research basins: current challenges and prospects". St. Petersburg, Russia, 17-20 September 2012.
- 2012 - Pasolli L., Notarnicola C., Bruzzone L., Bertoldi G., Zebisch M. (2012): Mapping spatial and

	temporal patterns of soil moisture with ASAR imagery in the Alps, SPIE Europe Remote Sensing, SAR Image Analysis, Modeling and Techniques XIV, 24-27 September 2012, Edinburgh, Scotland (UK) (conference paper).
2012	- Penna D., Mao L., Comiti F., Engel M., Dell'Agnese A., <u>Bertoldi G.</u> , 2012. Il ruolo dell'acqua di fusione glaciale e nivale sui deflussi e sul trasporto di sedimento in sospensione in un torrente alpino d'alta quota. – The role of glacier melt and snowmelt on runoff and suspended sediment transport in a high-elevation alpine stream. In AA.VV.: Previsione e mitigazione dei fenomeni di dissesto idrogeologico in Italia: il contributo del settore delle sistemazioni idraulico-forestali. Quaderni di Idronomia Montana, 30, 427-436, by V. Bagarello and V. Ferro. Edibios, 2012. ISBN: 978-88-97181-19-4
2012	- Pasolli, L.; Notarnicola, C.; Bruzzone, L.; Bertoldi, G.; Niedrist, G.; Tappeiner, U.; Zebisch, M. (2012): Spatial and temporal TOPSOIL WATER content mapping in alpine area by using SAR images, EUROSOIL 2012, Bari, 2-7.07.2012.
2012	- Engel, M., Penna, D., Bertoldi G. and Comiti, F. (2012): Tracer-basierte Modellkalibrierung von Abflussprozessen in einem vergletscherten Einzugsgebiet in den Alpen. In M. Weiler (Eds.): Wasser ohne Grenzen – Proceedings Tag der Hydrology 2012, Forum für Hydrologie und Wasserbewirtschaftung, Vol. 31, 85 – 90, ISBN: 978-3-942964-38-8.
2011	- Pasolli L, Notarnicola C, Bruzzone L, Bertoldi G, Niedrist G, Tappeiner U, Zebisch M, Del Frate F, Vaglio Laurin G (2011). Spatial and temporal mapping of soil moisture content with polarimetric RADARSAT 2 SAR imagery in the Alpine area. In: International Geoscience and Remote Sensing Symposium (IGARSS). doi: 10.1109/IGARSS.2011.6049380
2011	- Pasolli L, Notarnicola C, Bruzzone L, Bertoldi G, Niedrist G, Tappeiner U, Zebisch M, Del Frate F, Laurin GV (2011). Comparison of L and C band polarimetric SAR data for the retrieval of soil moisture in the Alps. In: Proceedings of SPIE - The International Society for Optical Engineering. PROCEEDINGS OF SPIE, THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING, ISSN: 0277-786X, doi: 10.1117/12.898877
2011	- Niedrist, G., Bertoldi, G., Della Chiesa, S., Hell, V., Mair, E., Demez, A., Tasser, E., Tappeiner, U. (2011): Abschlussbericht Klimawandel Südtirol, WP5 Ökohydrologie, 47 pp, Insitute for Alpine Environment, EURAC.
2010	- Notarnicola, C., G. Bertoldi, F. Del Frate, S. Della Chiesa, V. Hell, L. Pasolli, E. Santi, T. Shellenberger, U. Tappainer, G. Vaglio Laurin, B. Ventura, M. Zebisch, SOFIA, Soil and forest information retrieval by using Radarsat 2 images: first results of the project, proceedings of the ESA Living Planet Conference, Bergen, 28 June - 2 July 2010.
2010	- Della Chiesa, S., Bertoldi, G., Wohlfahrt, G., Albertson, J. D., and Tappeiner, U. (2010) Application of a vegetation dynamic model for mowed meadows. In: L' uomo nell' ecosistema: una relazione bilanciata? Eurac Bozen. vol. 56, Trento:Esperia srl. Atti del XIX Congresso S.It.E., 16-19.09.09, Bolzano, Italy.
2010	- Pasolli L, Notarnicola C, Bruzzone L, Bertoldi G, Niedrist G, Tappainer U, Zebisch M, Del Frate F, Laurin G V (2010). Analysis of polarimetric RADARSAT2 images for soil moisture retrieval in an alpine catchment . In: SAR Image Analysis, Modeling, and Techniques X. PROCEEDINGS OF SPIE, vol. 7829, ISBN: 9780819483461, ISSN: 1996-756X, doi: 10.1117/12.866266
2009	- Rastner P., Irsara L., Schellenberger T., Della Chiesa S., Bertoldi G., Endrizzi S., Notarnicola C. Christian Steurer and Zebisch M. (2009): Monitoraggio del manto nevoso in aree alpine con dati MODIS multi-temporali e modelli idrologici 13th ASITA National Conference 2009 1- 4.12. 2009, Bari, Italy.
2009	- Rastner P, Irsara L, Schellenberger T, Della Chiesa S, Bertoldi G, Endrizzi S, Notarnicola C, Zebisch M (2009). Snow cover monitoring and modelling in the Alps using multi temporal MODIS data. In: ISSW 09 - International Snow Science Workshop, Proceedings.
2009	- Bertoldi, G., Della Chiesa, S. and Tappeiner U., Modelling the interactions between soil water content and evapotranspiration spatial distribution in Alpine catchments, Proceedings of the 2nd International Multidisciplinary Conference on Hydrology and Ecology, Vienna, Austria, 20 – 23 April 2009.
2006	- Endrizzi, S., <u>Bertoldi, G.</u> , Neteler, M. and Rigon, R., Snow cover patterns and evolution at basin scale: GEOTop model simulations and remote sensing observations, <i>Proceedings of the 63rd Eastern Snow Conference</i> , pp 195-209, Newark, Delaware USA, 2006.
2006	- Bertoldi G., Timmermans W. J., Albertson J. D., and Kustas W. P., The Effect of Land - Atmosphere Feedbacks on the Spatial Structure of Land Surface Fluxes over Heterogeneous Terrain, <i>Proceedings of Italian XXX Hydraulic and Hydraulic Constructions National Congress</i> , Rome, Italy, 10-15 September 2006.

- 2006 - Entezarolmahdi R. Rigon R., and Bertoldi G., Assessment of Parameter Uncertainty for a Physically-based Hydrologic Model, using Automatic Optimization Approach, *Proceedings of Italian XXX Hydraulic and Hydraulic Constructions National Congress*, Roma, Italy, 2006.
- 2004 - Tiso C, Bertoldi, G. and Rigon R., The model Geotop-SF to calculate triggering of landslides and debris-flows. *Proceedings of Interpraevent Congress 2004*, Riva del Garda, TN, Italy, May 2004.
- 2004 - Rigon R., Cozzini A., Pisoni S., Bertoldi G. and Armanini A., A new simple method for the determination of the triggering of debris flows. *Proceedings of Interpraevent Congress 2004*, Riva del Garda, TN, Italy, May 2004.
- 2004 - Bertoldi G., Dietrich W.E., Miller N. L., Rigon R., Bedrock and soil contribution to the formation of sub-surface runoff by saturation in headwater catchments: observations and simulation using a distributed hydrological model, *Proceedings of Italian XXIX Hydraulic and Hydraulic Constructions National Congress*, Trento, Italy, 2004.
- 2004 - Zanotti F., Endrizzi S., Bertoldi G., Rigon R., The snow accumulation and melt module in GEOTOP, *Proceedings of Italian XXIX Hydraulic and Hydraulic Constructions National Congress*, Trento, Italy, 2004.
- 2004 - Bertoldi G., de Franceschi M., Salvaterra M., Rigon R., Survey and mapping of meteo/hydrological resources in the area of Trento Province, in Climate analysis of historical series of precipitation and temperatures, A. Bellin and D. Zardi editors, *Quaderni di Idronomia Montana*, 23, ed Bios, 2004.
- 2004 - Bertola P., Bertoldi G., Grisenti P., Piva G., Ragazzi M., Righetti M., Rigon R., Salvaterra M., Soppelsa G., Tomazzolli V., Integrated Research on Eutrophication Processes on Caldonazzo Lake (Trento, Italy). *Proceedings of the International Symposium of Sanitary and Environmental Engineering*, Taormina, Italy, 23-26 June 2004.
- 2002 - Bertoldi G., Rigon R. and Over T.M., A survey on the effects of topography on the hydrological cycle with the GEOTOP model, *Proceedings of Italian XXVIII Hydraulic and Hydraulic Constructions National Congress*, Potenza, Italy, 2002.
- 2002 - Rigon R., Bertoldi G. and Over T.M., GEOTOP: A model of the hydrological cycle, *Proceedings of Italian XXVIII Hydraulic and Hydraulic Constructions National Congress*, Potenza, Italy, 2002.
- 2000 - Bertoldi G., A study of the soil-atmosphere interactions at basin scale, using a distributed model, *M.S. dissertation in Environmental Engineering*, University of Trento, Italy, 2000.

INVITED SEMINARS

- 2014 - Bertoldi G., Della Chiesa S., Engel M., Niedrist G., G. Brenner G. J., Endrizzi S., Dall'Amico M., Cordano C., Tappeiner U. and Rigon R.: Process-based modeling of vegetation dynamics, snow, evapotranspiration and soil moisture patterns in an alpine catchment. *Geophysical Research Abstracts*, Vol. 16, 2014, European Geosciences Union, General Assembly 2014 - Vienna, Austria, 27 April – 2 May 2014. (solicited talk)
- 2011 - Bertoldi G., Della Chiesa, S., Niedrist, G., Hell, V., Mair, E., Tasser, E. and Tappeiner, U., Eco-hydrological modeling in Alpine Catchments: applications of the GEOTop model, Department of Geography, University of Zürich, Zürich, 1th March 2011.
- 2010 - Bertoldi G., W.P. Kustas, J.D. Albertson, *The effect of land cover variability in the lower atmosphere*, Institute of Meteorology and Climate Research, Garmisch-Partenkirchen, Germany, 19 July 2010.
- 2010 - Bertoldi G., S. Della Chiesa, S. Endrizzi, G. Niedrist, A. Rist, C. Notarnicola, G. Leitinger, E. Tasser and U. Tappeiner, *Towards Alpine ecohydrology: GEOTop model applications*, Institute of Meteorology and Climate Research, Garmisch-Partenkirchen, Germany, 21 May 2010.
- 2008 - Albertson, J. D., Bertoldi, G., and Kustas, W.P., *Correcting for Atmospheric Spatial Variability When Estimating Surface Fluxes From Remotely Sensed Land Surface Data*. AGU 2008 Joint Assembly, 27-30 May, 2008, Fort Lauderdale, Florida, USA.
- 2004 - Rigon R., Bertoldi G., Over T.M., and Tamanini D. *GEOTOP: a distributed model of the hydrological cycle in the remote sensing era*, CAHMDA*-II International Workshop on The Terrestrial Water Cycle: Modeling and Data Assimilation across Catchment Scales, October 25-27, 2004, Princeton, NJ, USA.

TALKS AND POSTERS

- 2015 - Bertoldi G., The LTER research area Matsch Valley. EGU Splinter meeting: "Towards a global mountain observing network: Exploring the diversity of mountain observing sites". European

- Geosciences Union, General Assembly 2015 - Vienna, Austria, 12-17 April 2015.
(talk)
- 2015 - Tappeiner U., Bertoldi G., Della Chiesa S., Brenner J., Obojes N., Niedrist G.. An interdisciplinary open-air laboratory to study Alpine ecohydrological systems under environmental and anthropogenic change. Geophysical Research Abstracts, Vol. 17, 2015, European Geosciences Union, General Assembly 2015 - Vienna, Austria, 12-17 April 2015.
(poster)
- 2015 - Bertoldi G., Brenner J., Notarnicola C., Grefeneder F., Nicolini I., Della Chiesa S., Niedrist G., Tappeiner U.: Monitoring soil moisture patterns in alpine meadows using ground sensor networks and remote sensing techniques. Geophysical Research Abstracts, Vol. 17, 2015, European Geosciences Union, General Assembly 2015 - Vienna, Austria, 12-17 April 2015.
(poster)
- 2014 - Obojes, N., Bertoldi G., Newesely C., Mayr S., Tappeiner, U. (2014) Dry conditions limit transpiration and growth European Larch in an inner-alpine dry valley. Zoologische und botanische Forschung in Südtirol, 4-5.09.2014, Bozen (Italy).
- 2014 - Bertoldi G., Della Chiesa S., Engel M., Niedrist G., Notarnicola, C., Tappeiner, U. Physically-based modeling in an experimental alpine catchment, TERENO International Conference, Bonn, 29/9 – 1/10 2014 (poster).
- 2014 - Bertoldi G., Inwieweit kann SAR zum Monitoring der Bodenfeuchte in Gebirgsregionen in Betracht gezogen werden? Tri-nationalen Workshop - Hydrologische Prozesse im Hochgebirge“, Obergurgl (AT) 28-30/9/2014. (talk)
- 2014 - Brenner J., Bertoldi G., Della Chiesa S., Niedrist G., Tappeiner U., Bronstert A. (2014): Modellazione degli impatti del cambiamento climatico sulla distribuzione spaziale dell'evapotraspirazione, dell'umidità del terreno e del manto nevoso in una vallata alpina. Convegno Nazionale di Idraulica e Costruzioni Idrauliche, Bari, 7-10 settembre 2014.
- 2014 - Bertoldi G., Notarnicola C., Greifeneder F., Cuozzo G., Della Chiesa S., Niedrist G., Tappeiner U. (2014): Un confronto multi-temporale tra la stima dell'umidità del terreno con immagini SAR e modello idrologico in ambito alpino. Convegno Nazionale di Idraulica e Costruzioni Idrauliche, pp 301-302, Bari, 7-10 Settembre 2014.
- 214 - Niedrist G., Tasser E., Bertoldi G., Della Chiesa S., Obojes N., Egarter-Vigl L., Tappeiner U. (2014): Shifting plant species composition in transplanted mountain grasslands: Is it all Climate Change? GfÖ annual meeting, September 8th to 12th, Hildesheim (Germany).
- 2014 - Niedrist G., Tasser E., Bertoldi G., Della Chiesa S., Obojes N., Egarter-Vigl L., Tappeiner U. (2014): 3 years of transplantation experiments in the Vinschgau valley: Impact of elevated temperatures on phyto-diversity and productivity of grassland meadows. Zoologische und botanische Forschung in Südtirol, 4-5.09.2014, Bozen (Italy).
- 2014 - Della Chiesa S., Niedrist G., Bertoldi G., Hafner H., Thalheimer M., Zebisch M., Notarnicola, C., Tappeiner, U. Monitoring soil moisture to improve irrigation efficiency in apple orchards in South Tyrol, Tagungsprogramm Zoologische und botanische Forschung in Südtirol_Programma del convegno Ricerca zoologica e botanica in Alto Adige_04.-05.2014 (talk)
- 2014 - Stamenkovic, J., C. Notarnicola, N. Spindler, G. Cuozzo, G. Bertoldi, G. Niedrist, S. Della Chiesa, F. Greifeneder, D. Tuia, M. Borgeaud, J. P. Thiran, Soil moisture estimation using synergy of optical, SAR, and topographic data with Gaussian process regression, SPIE Remote Sensing, Amsterdam, Netherlands, September 2014. (talk)
- 2014 - Engel M., Bertoldi G., Penna P., Mao L., Dell'Agnese A., Comiti F., Zerbe S. (2014). The Matsch Glacier foreland (South Tyrol): an integrated analysis of snow cover dynamics, runoff generation and sediment transport. Workshop: Ecology of Glacier Forelands. Obergurgl, Austria, 17 – 21 September 2014. (talk)
- 2014 - Notarnicola, C., L. Pasolli, G. Cuozzo, F. Greifeneder, G. Bertoldi, S. Della Chiesa, G. Niedrist, D. Castelletti, U. Tappeiner, L. Bruzzone, M. Zebisch, TEMPORAL AND SPATIAL SOIL MOISTURE DYNAMICS IN MOUNTAIN MEADOWS BY INTEGRATING RADARSAT2 IMAGES AND GROUND DATA, IGARSS 2014&35th Canadian Symposium on Remote Sensing, Quebec, Canada, 13-18 July 2014. (talk)
- 2014 - Paloscia S., E. Santi, S. Pettinato, C. Notarnicola, G. Cuozzo, F. Greifeneder, G. Bertoldi, The use of Cosmo-SkyMed images for retrieving snow depth and soil moisture in mountainous areas, IGARSS 2014&35th Canadian Symposium on Remote Sensing, Quebec, Canada, 13-18 July 2014. (talk)
- 2014 - Della Chiesa S., Bertoldi G., Niedrist G., Obojes N., Endrizzi S., Albertson J. D., Hoertnagl L., Wohlfahrt G., and Tappeiner U.: Hydrological cycling of alpine grassland along an elevation gradient in an inner dry alpine valley. Geophysical Research Abstracts, Vol. 16, 2014, European

- 2014 Geosciences Union, General Assembly 2014 - Vienna, Austria, 27 April – 2 May 2014. (poster)
- Penna D., Engel M., Mao L., Dell'Agnese A., Bertoldi G., and Comiti F.: Integrated use of stable isotopes and electrical conductivity for the analysis of the water sources to runoff in a glacierized alpine catchment. Geophysical Research Abstracts, Vol. 16, 2014, European Geosciences Union, General Assembly 2014 - Vienna, Austria, 27 April – 2 May 2014. (talk)
- 2014 - Engel M., Bertoldi G., Endrizzi S., Notarnicola C., Niedrist G. and Comiti F.: Using scale-dependent observational data for snow modelling in a glacierized catchment. Geophysical Research Abstracts, Vol. 16, 2014, European Geosciences Union, General Assembly 2014 - Vienna, Austria, 27 April – 2 May 2014. (talk)
- 2014 - Brenner G. J., Bertoldi G., Della Chiesa S., Niedrist G. and Bronstert A.: Modeling impacts of climate change on evapotranspiration and soil moisture spatial patterns in an alpine catchment. Geophysical Research Abstracts, Vol. 16, 2014, European Geosciences Union, General Assembly 2014 - Vienna, Austria, 27 April – 2 May 2014. (talk)
- 2014 - Greifeneder F., Notarnicola C., Cuzzo G., Spindler N., Bertoldi G., Della Chiesa S., Niedrist G., Stamenkovic J., and Wagner W.: Analysis of ASAR Wide Swath Mode time series for the retrieval of soil moisture in mountainous areas. Geophysical Research Abstracts, Vol. 16, 2014, European Geosciences Union, General Assembly 2014 - Vienna, Austria, 27 April – 2 May 2014. (poster)
- 2014 - Bertoldi G., Brenner G. J.: Un'analisi degli effetti del cambiamento climatico nella Val Venosta: innevamento, evapotraspirazione, umidità del terreno. Seminar 30, Bolzano, 16.6.2014.
- 2014 - Nikolopoulos, E. I., Anagnostou M. N., Kalogiros J., Anagnostou E.N., Marra F., Mair E., Bertoldi G., Tappeiner U., Borga M.: X-band dual-polarization radar observations as a hydrologic supporting tool in the alpine region of Northeast Italy. International Weather Radar and Hydrology symposium, 7-10.4.2014, Washington DC, USA.
- 2014 - Engel M., Esposito A., Penna D., Brusetti L., Bertoldi G., Comiti F., Zerbe S. (2014): Glacier retreat under the perspective of hydrogeochemistry and geomicrobiology in South Tyrol. AGM 2014, University of Innsbruck, Innsbruck, Austria, 27-28 February 2014 (poster)
- 2013 - Obojes N., Decarli D., Bertoldi G., Newesely C., Mayr S., Tappeiner U. (2013): Effects of climatic conditions on sap-flow and radial growth of mountain forests in an inner-alpine dry valley, IX Congresso Nazionale SISEF, LUB, Bolzano/Bozen, 16-19 September 2013. (talk)
- 2013 - Bertoldi G., Notarnicola C., Pasolli L., Della Chiesa S., Niedrist G., Tappeiner U. (2013): How far can be SAR considered a tool for mountain hydrology? SPIE Remote Sensing Conference, Dresden, 23-26.09.2013 (talk).
- 2013 - Notarnicola C., Pasolli L., Bertoldi G., Bruzzone L., Niedrist G., Tappeiner U., Zebisch M. (2013): Polarimetric Radarsat2 Imagery for Monitoring Spatial and Temporal Water Content Variability in Alpine Area, ESA Living Planet Symposium, Edinburgh, 9-13 September 2013. (talk)
- 2013 - Pasolli L., Bertoldi G., Della Chiesa S., Niedrist G., Tappeiner U., Zebisch M., Notarnicola C. (2013): Multisource and multiscale soil moisture dynamic monitoring in mountain meadows, IGARSS13, Melbourne, 22-27 July 2013. (talk)
- 2013 - Notarnicola C., Bertoldi G., Pasolli L., Della Chiesa S., Niedrist G., Tappeiner U., Paloscia S., Santi E. (2013): Comparison of multi-source ground data, satellite observations and model simulations for monitoring soil moisture variability in mountain areas, ESA Soil Moisture Validation Workshop, ESA-ESRIN Frascati (RM), 1-3 July 2013. (talk)
- 2013 - Bottarin R., Tappeiner U., Niedrist G., Bertoldi G., Della Chiesa S., Engel M., Obojes N., Tasser E. (2013): Presentation LTER site: "La zona arida centroalpina". LTER meeting Bologna, 8-9.05.2013 (talk).
- 2013 - Niedrist G., Bertoldi G., Della Chiesa S., Engel M., Obojes N., Tasser E., Tappeiner U. (2013): Down to the future: Insights from manipulative Climate Change experiments along an elevation transect in dry, mountain grasslands (Matsch valley, Italy) Invited presentation at IRSTEA, Grenoble (FR)
- 2013 - Anagnostou M., Kalogiros J., Nikolopoulos E., Anagnostou E., Marra F., Mair E., Bertoldi G., Tappeiner U., and Borga, 2013. Evaluating the potential of X-band polarimetric radar observations in mountainous hydrology . Geophysical Research Abstracts, Vol. 15, 2013, European Geosciences Union, General Assembly 2013 - Vienna, Austria, 7 – 12 April 2013. ISSN: 1607-7962 (poster)
- 2013 - Borga M., Kalogiros J., Nikolopoulos E., Anagnostou M., Anagnostou E., Petersen W., Tollardo M., Marra F., and Bertoldi G. , 2013. Multi-sensor precipitation measurements during HyMeX Special Observation Period in Northeast Italy . Geophysical Research Abstracts, Vol. 15, 2013, European Geosciences Union, General Assembly 2013 - Vienna, Austria, 7 – 12 April 2013.

- ISSN: 1607-7962 (talk)
- 2013 - Engel M., Comiti F., Penna D., Notarnicola C., Bertoldi G. (2013): Snow modelling in a glacierized catchment using scale-dependent calibration data. Geophysical Research Abstracts, Vol. 15, 2013, European Geosciences Union, General Assembly 2013 - Vienna, Austria, 7 – 12 April 2013. ISSN: 1607-7962. (poster)
- 2013 - Niedrist, G., Obojes, N., Bertoldi, G., Della Chiesa, S. Tasser, E., Tappeiner, U. 2013. Spatiotemporal variability of increasing temperature impacts on grassland vegetation along an elevation transect in the Alps. Geophysical Research Abstracts, Vol. 15, 2013, European Geosciences Union, General Assembly 2013 - Vienna, Austria, 7 – 12 April 2013. ISSN: 1607-7962 (poster)
- 2013 - Della Chiesa S., Bertoldi G., Niedrist G., Tappeiner U. 2013. Soil-plant-atmosphere processes along an elevation gradient in a dry alpine valley . Geophysical Research Abstracts, Vol. 15, 2013, European Geosciences Union, General Assembly 2013 - Vienna, Austria, 7 – 12 April 2013. ISSN: 1607-7962 (poster)
- 2013 - Bertoldi G. Notarnicola C., Pasolli L., Della Chiesa S., Niedrist G., Tappeiner U., , 2013. Modelling and observing soil moisture patterns in alpine meadows using multi-source ground and remote-sensing observations . Geophysical Research Abstracts, Vol. 15, 2013, European Geosciences Union, General Assembly 2013 - Vienna, Austria, 7 – 12 April 2013. ISSN: 1607-7962 (talk)
- 2013 - Penna D., Engel M., Mao L., Dell'Agnese A., Bertoldi G., Comiti F. (2013): The role of snowmelt and glacier melt on runoff in a glacierized catchment: a multi-tracer experiment. Geophysical Research Abstracts, Vol. 15, 2013, European Geosciences Union, General Assembly 2013 - Vienna, Austria, 7 – 12 April 2013. ISSN: 1607-7962. (talk)
- 2013 - Bertoldi G., Notarnicola C., Pasolli L., Della Chiesa S., Niedrist G., Tappeiner U.: Mapping soil moisture and evapotranspiration in mountain regions: a case study in South Tyrol. Workshop Operational hydrological analysis and forecasting: opportunities, developments, users' requirements, Bolzano/Bozen, EURAC, April 17, 2013. (talk)
- 2013 - Niedrist G., N. Obojes, G. Bertoldi, S. Della Chiesa, E. Tasser, U. Tappeiner, 2013: Grassland transplantations along an elevation gradient: Evaluating impacts of a simulated temperature increase on phytodiversity and aboveground productivity, Mountain under Watch 2013, 20th – 21st February 2013, Aosta Valley, Italy. (poster)
- 2013 - Della Chiesa S., Bertoldi G., Niedrist G., Tappeiner U., 2013: Ecohydrological processes along an elevation gradient in an inner dry alpine valley, Mountain under Watch 2013, 20th – 21st February 2013, Aosta Valley, Italy. (poster)
- 2013 - Obojes, N., C. Newesely, E. Tasser, G. Bertoldi, S. Mayr, U. Tappeiner, 2013: Effects of climatic conditions on sap-flow and radial increment of Larix decidua and Pinus cembra in an inner-alpine dry area, Mountain under Watch 2013, 20th – 21st February 2013, Aosta Valley, Italy. (poster)
- 2013 - Tappeiner, U., G. Niedrist, G. Bertoldi, S. Della Chiesa, N. Obojes, M. Engel, R. Bottarin, E. Tasser: Mountains under watch: Many eyes see more!, Mountain under Watch 2013, 20th – 21st February 2013, Aosta Valley, Italy. (talk)
- 2013 - Bertoldi G. Notarnicola C., Pasolli L., Della Chiesa S., Niedrist G., Tappeiner U., 2013: Modelling soil moisture dynamic of a mountain catchment using multi-source, scale-dependent observations, Mountain under Watch 2013, 20th – 21st February 2013, Aosta Valley, Italy. (talk)
- 2013 - Engel M., Esposito A., Varolo E., Brusetti L., Comiti F., Mimmo T., Bertoldi G., Bottarin R., Zerbe S., 2013: EMERGE - Retreating glaciers and EMERGING Ecosystems in the Southern Alps, Mountain under Watch 2013, 20th – 21st February 2013, Aosta Valley, Italy. (poster)
- 2012 - Dell'Agnese A., Comiti F., Mao L., Penna D., Engel M., Buzzi E., Bertoldi G., 2012. Linking sediment transport to runoff dynamics in a glacierized mountain basin (Saldur river, Eastern Italian Alps). International workshop: monitoring bedload and debris flows in mountain basins. Bozen-Bolzano, Italy, 10-12 October 2012 (poster)
- 2012 - Comiti F., Macconi P., Arattano M., Bertoldi G., Bettella F., Borga M., Brardinoni F., Cavalli M., D'Agostino V., Marchi L., Penna D., Pozza E., 2012. Debris flow monitoring in the Gadia catchment (upper Adige basin, Eastern Italian Alps). International workshop: monitoring bedload and debris flows in mountain basins. Bozen-Bolzano, Italy, 10-12 October 2012 (poster)
- 2012 - Mair E., Bertoldi G., Della Chiesa S., Niedrist G., Tasser E., Tappeiner U. (2012): Improving precipitation estimates at hourly timescales to model water budget in Alpine catchments. Graubünden forscht – Young Scientists in Contest, 12.-13.09.12, Davos (CH) (poster).
- 2012 - Mair E., Bertoldi G., Della Chiesa S., Niedrist G., Egarter Vigl L., Tappeiner U. (2012): An approach to improve precipitation estimation to model water budget in Alpine catchments. EGU

- General Assembly 2012, 24.-28.04.12, Wien (A). (poster)
- 2012 - Della Chiesa S., Bertoldi G., Niedrist G., Tappeiner U. (2012). Modelling surface water balance and grassland productivity of alpine managed meadows along an altitudinal transect. 7. Tagung „Zoologische und botanische Forschung in Südtirol“, 06.-07.09.12, Bozen. (talk)
- 2012 - Cordano E., Andreis D., Zottele F., Eccel E., Toller G., Endrizzi S., Bertoldi G., Dall'Amico M., Sartori G., Rigon R.: IDROCLIM: idrologia applicata alla definizione dei fabbisogni irrigui, Fondazione E. Mach, S. Michele, Trento, 25 settembre 2012.
- 2012 - Mair E., Bertoldi G., Della Chiesa S., Niedrist G., Tasser E., Tappeiner U. (2012). Estimation of (winter-)precipitation in the Alpine catchment Matschertal: requirements, difficulties and approaches. 7. Tagung „Zoologische und botanische Forschung in Südtirol“, 06.-07.09.12, Bozen. (talk)
- 2012 - Engel, M., Bertoldi, G., Penna, D. and Comiti, F. (2012): Tracer-based runoff modelling in a glacierized alpine catchment. EGU General Assembly 2012, 24.-28.04.12, Wien (A). (poster)
- 2012 - Bertoldi G., Albertson J.D., Tappeiner U. (2012): Use of wavelet transform to analyze the hydrological response of an alpine glaciated catchment. EGU General Assembly 2012, 24-28.04.2012, Wien (A). (talk)
- 2012 - Bertoldi G., Della Chiesa S. (2012): GEOTop model recent developments for catchment- and plot- scale applications, 2nd GEOTop Workshop, University of Zürich, 23.2.2012, Zürich. (talk)
- 2012 - Bertoldi G., Della Chiesa S., Engel M., Mair E. (2012): Modelling eco-hydrological processes with GEOTop, 3rd GEOTop Workshop, EURAC, 7.8.2012, Bolzano. (talk)
- 2012 - Penna, D., Mao, L., Comiti, F., Engel, M., Dell'Agnese, A., Bertoldi, G. (2012) Effects of glaciers on runoff and suspended sediment transport in a high-elevation experimental catchment. 14th Biennial ERB Conference, 17.-20.9.2012, St. Petersburg (Rus). (talk)
- 2011 - Comiti, F., Mao, L., Penna, D., Dell'Agnese, A., Engel, M., Bertoldi, G. (2011): How relevant are glaciers for water and sediment fluxes in alpine basins? A new monitoring site in the Eastern Italian Alps. AGU, 3.-7.12.2011, San Francisco (USA).
- 2011 - Bertoldi, G. and S. Della Chiesa, Eco-hydrological modeling in Alpine catchments: integrations of the GEOTop model with a Vegetation Dynamic Model (VDM) and a hydrologic simulation in Mazia Valley (BZ), 12/9/2011, Fondazione Mach - Istituto Agrario di S. Michele all'Adige, Italy. (talk)
- 2011 - Bertoldi, G., S. Della Chiesa, G. Niedrist, V. Hell, E. Tasser, and U. Tappeiner, Modelling the water and energy budget in alpine environments at plot and catchment scale, Geophysical Research Abstracts Vol. 13, EGU2011-10152, 2011 EGU General Assembly 2011, Vienna, Austria, 2011. (talk)
- 2011 - Pasolli L., C. Notarnicola, M. Zebisch, L. Bruzzone, S. Della Chiesa, G. Bertoldi, G. Niedrist, and U. Tappeiner, Exploitation of polarimetric RADARSAT2 images for spatial and temporal estimation of soil moisture in an alpine catchment, Geophysical Research Abstracts Vol. 13, EGU2011-10009, 2011 EGU General Assembly 2011, Vienna, Austria, 2011. (poster)
- 2011 - Niedrist, G., G. Bertoldi, S. Della Chiesa, V. Hell, E. Tasser, and U. Tappeiner, Transplantation experiments in an inner-alpine dry valley to predict Climate Change effects on agriculturally used grassland ecosystems, Geophysical Research Abstracts Vol. 13, EGU2011-10218, 2011 EGU General Assembly 2011, Vienna, Austria, 2011. (poster)
- 2011 - G. Bertoldi and Della Chiesa S, Integration of vegetation in the physically-based hydrological model GEOTop, Workshop on Integrated, Physically-Based Hydrological Modeling, January 17-18, 2011 Università degli Studi di Padova, Padua, Italy.
- 2010 - G. Bertoldi, S. Della Chiesa, S. Endrizzi, G. Niedrist, C. Notarnicola, G. Leitinger, R. Rigon, U. Tappeiner, Alpine ecohydrology: an experimental and numerical case study, Advances in Ecohydrology Summer School, Palermo, June 2010.
- 2010 - Della Chiesa, S., G. Bertoldi, G. Wohlfahrt, A. Rist, G. Niedrist, J. D. Albertson, and U. Tappeiner. Modelling vegetation dynamics for Alpine meadows, Naturmuseum Südtirol Tagung, Bolzano, Italy, 2-3/9/2010.
- 2010 - Notarnicola, C., G. Bertoldi, F. Del Frate, S. Della Chiesa, V. Hell, L. Pasolli, (4), E. Santi, T. Shellenberger, U. Tappainer, G. Vaglio Laurin, B. Ventura, M. Zebisch, SOFIA, Soil and forest information retrieval by using Radarsat 2 images: first results of the project, ESA Living Planet Conference, Bergen, 28 June - 2 July 2010 (poster).
- 2010 - Notarnicola, C., P. Rastner, L. Irsara, N. Moelg, G. Bertoldi, S. Dalla Chiesa, S. Endrizzi, and M. Zebisch, Analysis of MODIS snow cover time series over the alpine regions as input for hydrological modeling, Geophysical Research Abstracts, Vol. 12, EGU2010-8297, 2010, EGU General Assembly, Vienna, Austria, 2010. (poster)
- 2010 - Bertoldi, G., S. Della Chiesa, G. Niedrist, A. Rist, E. Tasser, and U. Tappeiner. Space-time

evolution of soil moisture, evapotranspiration and snow cover patterns in a dry alpine catchment: an interdisciplinary numerical and experimental approach. Geophysical Research Abstracts, Vol. 12, EGU2010-12109, 2010, EGU General Assembly, Vienna, Austria, 2010. (poster)

2010 - Notarnicola, C., G. Bertoldi, P. Rastner, L. Irsara, N. Mölg, S. Della Chiesa, S. Endrizzi, A. Rist, T. Schellenberger, M. Zebisch. Using snow cover data from remote sensing, hydrological modeling and ground measurements for water budget estimation data, ESA workshop on Cold Region Hydrology, Innsbruck (AU), April 2010. (poster)

2010 - Bertoldi, G., C. Notarnicola, G. Leitinger, S. Endrizzi, M. Zebisch, S. Della Chiesa, and U. Tappeiner. Using Landsat land surface temperature to assess the spatial consistency of a distributed hydrological model in alpine environments, Geophysical Research Abstracts, Vol. 12, EGU2010-10386, 2010, EGU General Assembly, Vienna, Austria, 2010. (talk)

2010 - Della Chiesa, S., G. Bertoldi, G. Wohlfahrt, A. Rist, G. Niedrist, J. D. Albertson, and U. Tappeiner. Modelling vegetation dynamics for Alpine meadows, Geophysical Research Abstracts, Vol. 12, EGU2010-10160, 2010, EGU General Assembly, Vienna, Austria, 2010. (talk)

2009 - Rastner, P., L. Irsara, T. Schellenberger, S. Della Chiesa, G. Bertoldi, S. Endrizzi, C. Notarnicola, M. Zebisch, Monitoraggio del manto nevoso in aree alpine con dati MODIS multi-temporali e modelli idrologici, 13th ASITA National Conference 2009 1-4.12.2009, Bari, Italy. (talk)

2009 - Bertoldi, G., Della Chiesa, S., Endrizzi, S., Dall'Amico, M., Cordano, E., Simoni, S., Tappeiner, U., Rigon, R. The GEOTop model: eco-hydrological applications at plot and catchment scale, 1^o Riunione Gruppo di Lavoro SISEF Modellistica Forestale, Workshop, Bologna, Università di Bologna, Facoltà di Agraria, 18 Dicembre 2009. (talk)

2009 - Bertoldi G., Rist A., Niedrist G., Della Chiesa S., Petitta M., Leitinger G., Tasser E. and Tappeiner U. (2009): Climate Change in South Tyrol: Approccio multidisciplinare per lo studio degli impatti eco-idrologici in una valle alpina. Environment, Including Global Change. 5-9.10.09 Palermo, Italy. (poster)

2009 - Bertoldi, G., Notarnicola, C., Leitinger, G., Tasser, E., Tappeiner, U. (2009). La distribuzione della temperatura in una valle alpina in funzione della vegetazione e della morfologia. XIX Congresso S.It.E., 16-19.09.09, Bolzano, Italy. (talk)

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